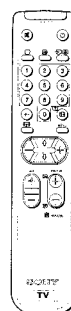
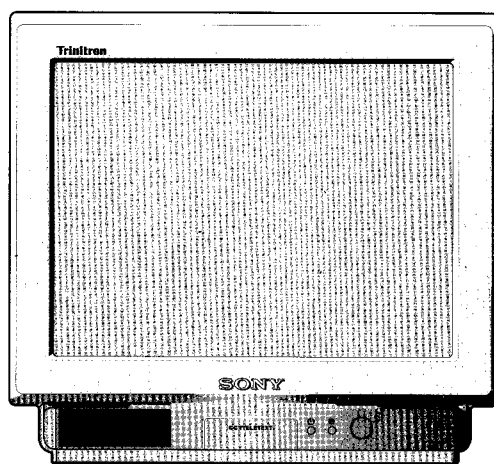


# SERVICE MANUAL

# BE-4A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-M2170A	RM-836	Italian	SCC-J05B-A	KV-M2170K	RM-836	OIRT	SCC-J03B-A
KV-M2171A	RM-836	Italian	SCC-J05A-A	KV-M2171K	RM-836	OIRT	SCC-J03A-A
KV-M2170B	RM-836	French	SCC-J06A-A	KV-M2171KR	RM-836	Russian	SCC-J03C-A
KV-M2171B	RM-836	French	SCC-J06B-A	KV-M2170L	RM-836	Irish	SCC-J02B-A
KV-M2170D	RM-836	AEP	SCC-J08A-A	KV-M2171L	RM-836	Irish	SCC-J02A-A
KV-M2171D	RM-836	AEP	SCC-J08B-A	KV-M2170U	RM-836	UK	SCC-J01B-A
KV-M2170E	RM-836	Spanish	SCC-J04B-A	KV-M2171U	RM-836	UK	SCC-J01A-A
KV-M2171E	RM-836	Spanish	SCC-J04A-A				



TRINITRON® COLOR TV  
**SONY®**



ITEM	MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20 UHF: E21-E69		PAL
French	B/G/H, L	VHF: E2-E12, S1-S20, S21-S41, F2-F10, B-Q UHF: E21-E69, F21-F69		PAL, SECAM
AEP	B/G/H	VHF: E2-E12, S1-S20, S21-S41 UHF: E21-E69		PAL, SECAM
Spanish	B/G/H	VHF: E2-E12, S1-S20, S21-S41 UHF: E21-E69		PAL
OIRT Russian	B/G, D/K	B/G VHF: E2-E12 UHF: E21-E69 Hyper: S1-S41 (KV-M2170K/M2171K) Super: S1-S20 (KV-M2171KR) D/K VHF: R01-R12 UHF: R21-R69		PAL, SECAM NTSC3.58/4.43 (video input only)
Irish UK	I	VHF: A-J (KV-M2170L/M2171L) UHF: 21-69 Hyper: S1-S41 (KV-M2170L/M2171L)		PAL

MODEL	Italian	French	AEP	Spanish	OIRT Russian	Irish UK
Power Consumption	58W	58Wh	58W	58W	58W	75W

## SPECIFICATIONS

Picture Tube      Hi-Black Trinitron  
 Approx. 55 cm (21 inches)  
 (Approx. 51 cm picture measured  
 diagonally)  
 100° -deflection

### Input/Output Terminals

#### [INPUTS]

21-pin connector (CENELEC standard)

- audio / video input
- RGB input

#### [OUTPUTS]

Ω Headphone jack : minijack

Sound output      4W (RMS)  
                          5W (music power)

Dimensions      513x475x475 mm approx.

Weight      Approx. 21.0kg

Supplied accessories      RM-836 Remote Commander (1)  
                                  IEC designated batteries (2)

Other features      TELETEXT (KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171KR/M2171L/M2171U)


## [RM-836]

Remote control system    infrared control  
 Power requirements        3V dc (2 batteries) R6 (size AA)  
 Dimensions                  Approx. 210x45x24 mm (w/h/d)  
 Weight                        Approx. 90g (Not including batteries)

Design and specifications are subject to change without notice.

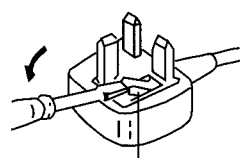
Model name Item	KV-M2170A KV-M2171A	KV-M2170B KV-M2171B	KV-M2170D KV-M2171D	KV-M2170E KV-M2171E	KV-M2170K KV-M2171K KV-M2171KR	KV-M2170L KV-M2171L KV-M2170U KV-M2171U
Pal Comb	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	ON	ON	ON	ON
Woofer Box	OFF	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	OFF	OFF	OFF	OFF	OFF	OFF
Front in (3)	OFF	OFF	OFF	OFF	OFF	OFF
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	OFF	OFF	OFF	OFF	OFF	OFF
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	OFF	OFF	OFF	OFF	ON
Norm D/K	OFF	OFF	OFF	OFF	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

### WARNING ( KV-M2170L/M2171L/M2170U/M2171U only )

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the  mark.

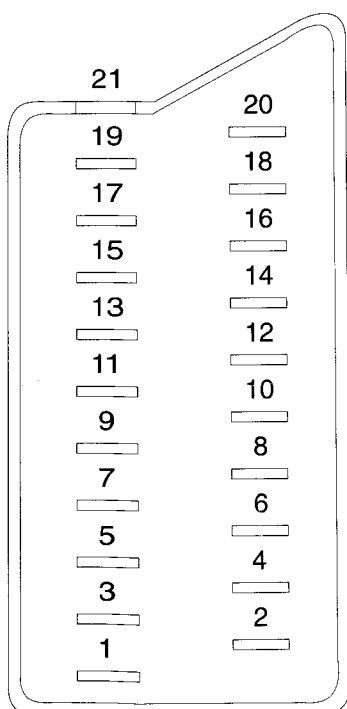
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.

When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.  
 Open the fuse compartment with the screwdriver blade and replace the fuse.

## 21 pin connector ( ①-1 )



Pin No		Signal	Signal level
1	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance: less than 1kohm*
2	○	Audio input B (right)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
3	○	Audio output A (left)	Standard level: 0.5Vrms Output impedance: less than 1kohm*
4	○	Ground (audio)	
5	○	Ground (blue)	
6	○	Audio input A (left)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
7	○	Blue input	0.7V±3dB, 75ohms, positive
8	○	Function select (AV control)	High state (9.5—12V): Part mode Low state (0—2V): TV mode Input impedance: More than 10kohms Input capacitance: Less than 2nF
9	○	Ground (green)	
10	○	Open	
11	○	Green	Green signal: 0.7V±3dB. 75ohms, positive
12	○	Open	
13	○	Ground (red)	
14	●	Ground (blanking)	
15	○	Red input	0.7V±3dB, 75ohms, positive
	—	(S signal) chroma input	0.3V±3dB, 75ohms, positive
16	○	Blanking input (Ys signal)	High state (1—3V) Low state (0—0.4V) Input impedance: 75ohms
17	○	Ground (video output)	
18	○	Ground (video input)	
19	○	Video output	1V±3dB, 75ohms, positive Sync: 0.3V(—3, +10dB)
20	○	Video input	1V±3dB, 75ohms, positive Sync: 0.3V(—3, +10dB)
	—	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync: 0.3V(—3, +10dB)
21	○	Common ground (plug, shield)	

○ Connected    ● Not Connected (open)    \* at 20Hz - 20kHz



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## CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

## WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.  
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

## SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.


## ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

## ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

## ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

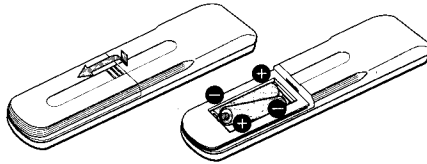
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDICUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

## SECTION 1 GENERAL

### Getting Started

#### Step 1

#### Inserting the Batteries into the Remote Commander



#### Step 2

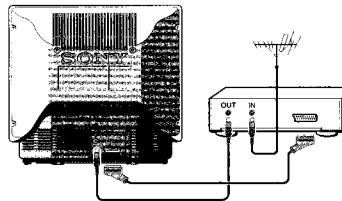
#### Connecting the Aerial

If you connect a VCR, skip to step 3.

Connect an external aerial to the socket .

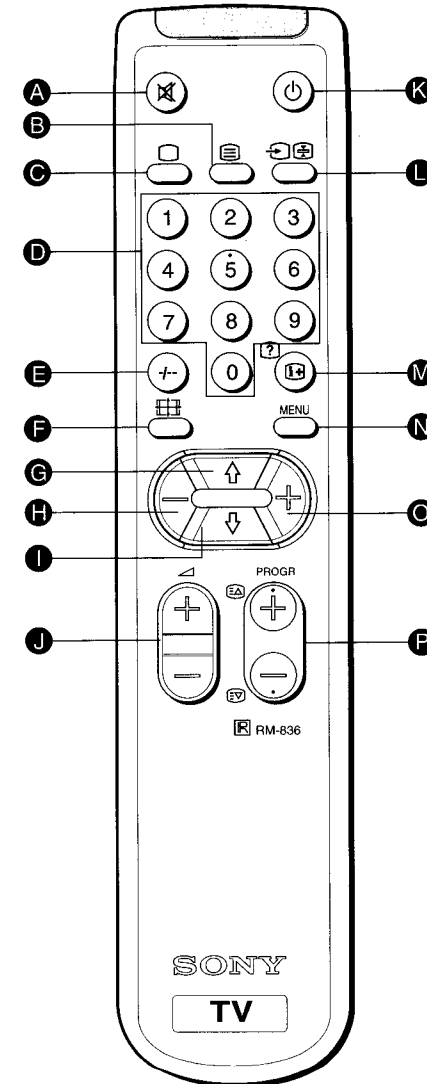
#### Step 3

#### Connecting a VCR



It is recommended to tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 12.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

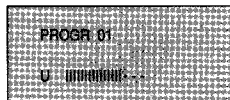


## Step 4

### Presetting Channels Automatically

TV searches for all available channels. If manual tuning is preferred see Menu option - Presetting Channels Manually.

- 1 Plug into mains.  
Press power switch **⏻** on TV set.
- 2 Press and hold **▶▶** **S** on TV set for 2 seconds.  
Auto tuning starts and screen shows.



- Notes**
- When Auto tuning stops the programme on position 1 is seen.
  - KV-M2171U/M2171L only – channels are automatically stored as follows:

KV-M2171U	KV-M2171L
Programme 1 BBC1	RTE1
Programme 2 BBC2	RTE2
Programme 3 ITV	BBC1
Programme 4 CH4 or S4C	BBC2
Programme 5 –	ITV
Programme 6 –	CH4 or S4C

## TV Operation

### TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the Remote Commander.

To	Press
Switch on	<b>⏻</b> <b>W</b> on TV
Switch off temporarily	<b>⏻</b> <b>K</b> <i>TV is now in standby mode, <b>⏻</b> indicator <b>V</b> on TV lights.</i>
Switch on again	<b>⏻</b> <b>C</b> , <b>PROGR +/-</b> <b>P</b> <b>U</b> or any number button <b>D</b>
Switch off completely	<b>⏻</b> <b>W</b> on TV <i>To save energy we recommend switching off completely when TV is not in use.</i>
Select programmes	<b>PROGR +/-</b> <b>P</b> <b>U</b> or number buttons <b>D</b> <i>For double digit numbers press <b>-/--</b> <b>E</b> then the number e.g. For 23, press <b>-/--</b> <b>E</b> then 2 and 3.</i>
Display the programme number	<b>⏻</b> <b>M</b> <i>Press again to make programme number disappear.</i>
Adjust the volume	<b>⏻</b> <b>+/-</b> <b>J</b> <b>T</b>
Mute the sound	<b>⏻</b> <b>A</b> <i>Press again to restore sound.</i>
View video input	<b>⏻</b> <b>L</b> <b>R</b> <i>Press again to return to TV programme.</i>
View programmes in 16:9 mode	<b>⏻</b> <b>F</b> <i>Press again to return to 4:3 mode.</i>

## Teletext Operation (only for KV-M2171U/M2171L)

### Viewing Teletext

Teletext is an information service broadcast by TV stations.

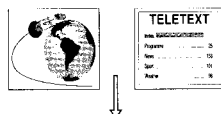
- 1 Select the channel which carries the teletext service you wish to receive.
- 2 Press **⏻** **Ⓜ** to switch on teletext.
- 3 Input three digits for the page number using the programme number buttons **0-9** or **PROGR +/-** **Ⓜ**.
- 4 Press **⏻** **Ⓜ** to switch off teletext.

**Note** • Teletext errors may occur if the broadcasting signals are weak.

### Using Other Teletext Functions

#### Superimposing teletext on the TV

Press **⏻** **Ⓜ** once in teletext mode or twice in TV mode to superimpose teletext on the TV screen.  
Press **⏻** **Ⓜ** again to cancel superimposing.



#### Freezing a teletext subpage

Press **⏻** **Ⓜ** (HOLD) to freeze the subpage. Freezing the page prevents the information that is displayed from being updated.  
Press **⏻** **Ⓜ** to cancel HOLD and allow update to continue.



#### Revealing concealed information (eg: answers to a quiz)

Press **?** **Ⓜ** to reveal information.  
Press again to conceal the information.

#### Using colour buttons to access pages

When the colour coded menu appears at the bottom of a page, press the colour button (red, green, blue or yellow) **GHI O** to access the corresponding page.

**Note** • A programme status message in a blue box may appear when you change programmes (depends on broadcasters).

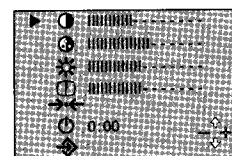
## MENU Operation

Use buttons on Remote Commander to control Menu screen.

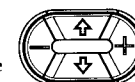


**MENU** **N**  
Menu Screen  
on/off

**Green** **G**  
scroll up



**Red** **H**  
decrease



**Yellow** **O**  
increase/confirm(OK)

**Blue** **I**  
scroll down

### Adjusting the Picture

- 1 Press **MENU** **N**.
- 2 Press **Green** **G** or **Blue** **I** button to select the item you wish to change.

Symbol	Item	-	Effect	+
<b>I</b>	Picture	Less	More	
<b>G</b>	Colour	Less	More	
<b>O</b>	Brightness	Darker	Brighter	
<b>D</b>	Sharpness	Softer	Sharper	

- 3 Press **Red** **H** or **Yellow** **O** button to change levels.

- 4 Press **MENU** **N** to return to normal TV screen.

**Note** • To reset to factory preset picture levels, press **Green** **G** or **Blue** **I** button to select **↔** and press **Yellow** (OK) **O** button.

## Using the Sleep Timer

The TV may be set to switch to the standby mode automatically after a length of time chosen by you. You may set the time in 30 minutes steps up to 4 hours.

1 Press MENU **N**.

2 Press green **G** or blue **I** button to select **⏻**.



3 Press red **H** or yellow **O** button to set time delay.  
0.00 (OFF) 0.30 1.00 1.30 .... 4.00

4 Press MENU **N** to return to normal TV screen.  
When watching TV, press **⏻** **M** to display time remaining.

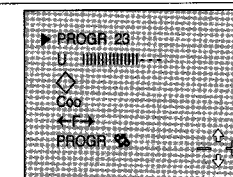
## Presetting Channels Manually

Up to 60 programme positions are available for presetting channels.

1 Press MENU **N**.

2 Press green **G** or blue **I** button to select **↔** and press yellow (OK) **O** button.

3 Select programme number using PROGR +/- **P** **U** or the number buttons **D**.



4 Press green **G** or blue **I** button to select tuning bar (|||||....) and press red **H** or yellow **O** button to start channel search. When a channel is found the tuning bar stops moving and you see the picture.

5 If you want to store, press green **G** or blue **I** button to select **◇** and press yellow (OK) **O** button. If you do not want to store, press red **H** or yellow **O** button to continue search.

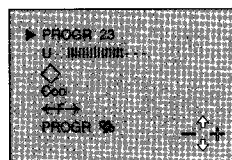
6 Repeat steps 3 to 5 for all other channels.

7 Press MENU **N** to return to normal TV screen.

## Skiping Programme Positions

You can skip unused programme positions when selecting channels with the PROGR +/- **P** **U** buttons. You can still select them, however, using the number buttons **0**.

- 1 Press MENU **N**.
- 2 Press green **G** or blue **I** button to select ⇨ and press yellow **0** button.
- 3 Select programme number you want to skip using PROGR +/- **P** **U** button or number buttons **0**.
- 4 Press green **G** or blue **I** button to select Coo and press yellow (OK) **0** button.
- 5 Press green **G** or blue **I** button to select ◇ and press yellow (OK) **0** button to store.
- 6 Repeat steps 3 to 5 for other unused programme positions.
- 7 Press MENU **N** to return to normal TV screen.

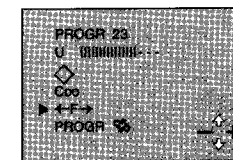


**Note** • To restore a skipped programme number, refer to "Presetting Channels Manually".

## Fine-Tuning Channels

You can fine tune a stored channel if necessary.

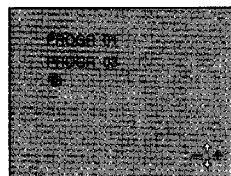
- 1 Select the channel you wish to fine tune.
- 2 Press MENU **N**.
- 3 Press green **G** or blue **I** button to select ⇨ and press yellow (OK) **0** button.
- 4 Press green **G** or blue **I** button to select ⇨F⇨ and use red **1** or yellow **0** button to adjust tuning.
- 5 Press green **G** or blue **I** button to select ◇ and press yellow (OK) **0** button to store.
- 6 Press MENU **N** to return to normal TV screen.



## Exchanging Programme Positions

After tuning you may wish to rearrange the programme positions.

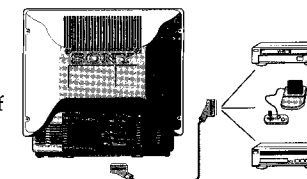
- 1 Press MENU **N**.
- 2 Press green **G** or blue **B** button to select ⇨ and press yellow (OK) **O** button.
- 3 Press green **G** or blue **B** button to select **PROGR** **00** and press yellow (OK) **O** button.
- 4 Press red **H** or yellow **O** button to select the first programme position.
- 5 Press the blue **B** button.
- 6 Press the red **H** or yellow **O** button to select the second programme position.
- 7 Press blue **B** button to select **00** and press yellow (OK) **O** button to exchange.
- 8 Repeat steps 4 to 7 for other programme positions.
- 9 Press MENU **N** to return to normal TV screen.



## Optional Connections

### Using the 21-pin Connector

Your TV has one 21-pin connector **Y** on the rear of the set. You can connect optional audio or video equipment to this connector, such as a VCR, video games or a video disc player.



- 1 Press ⇨ **L** **R** to view the video input signal.
- 2 Press ⇨ **L** **R** or **O** **C** to return to normal TV screen.

### Connecting Headphones

Plug in the headphones to the **Ω** **C** socket on the front of the TV set, then the sound from the speaker is muted.

Here are some simple solutions to the problems which affect the picture and sound.

- If you continue to have these problems, have your TV serviced by qualified personnel.
- NEVER open the casing yourself.

**TV system**

## PAL

KV-M2170L/M2171L  
UHF 21-69  
VHF A-J  
Hyper S1-S41  
KV-M2170U/M2171U  
UHF 21-69

HiBlack Trinitron  
Approx 54.5 cm (21 inches) (Approx 51 cm  
picture measured diagonally)

21-pin connector (CENELEC standard)  
including audio/video input, RGB input

Headphone jack - minijack

4W (RMS)  
5W (music power)

## 75W

513x475x475mm approx.

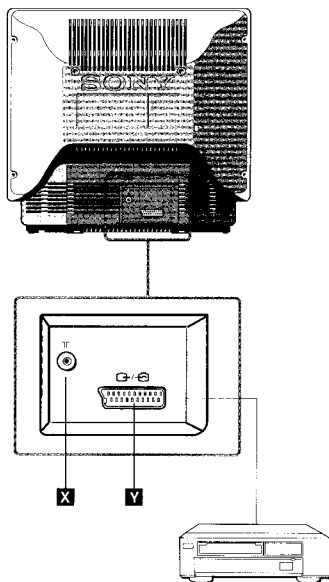
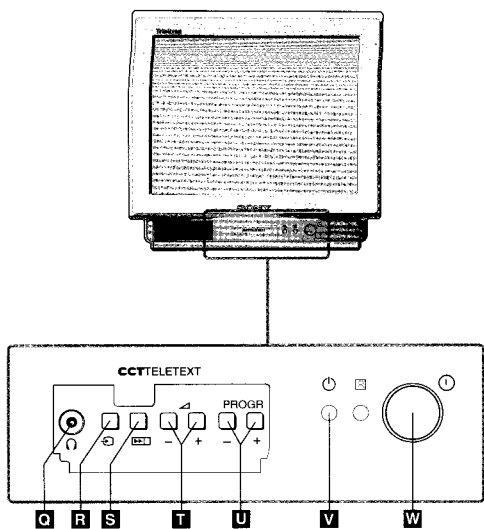
## 21 kg

RM-836 Remote Commander (1)  
IEC designated batteries (2)

TELETEXT (for KV-M2171U/M2171L)

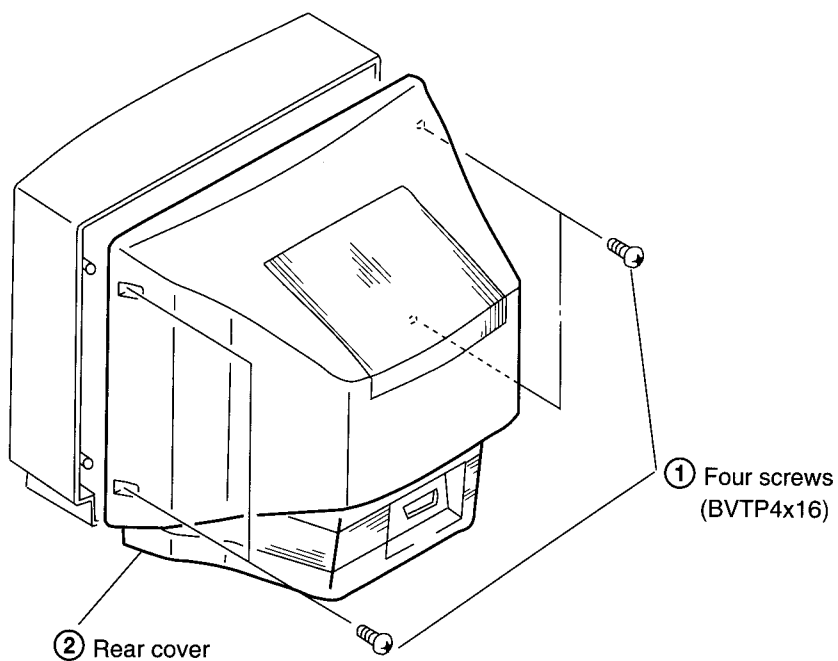
- Design and specifications are subject to change without notice.



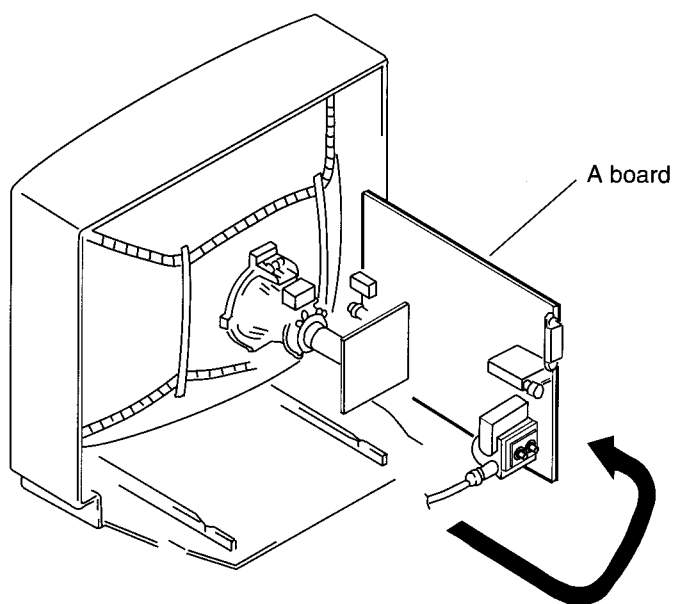


## SECTION 2 DISASSEMBLY

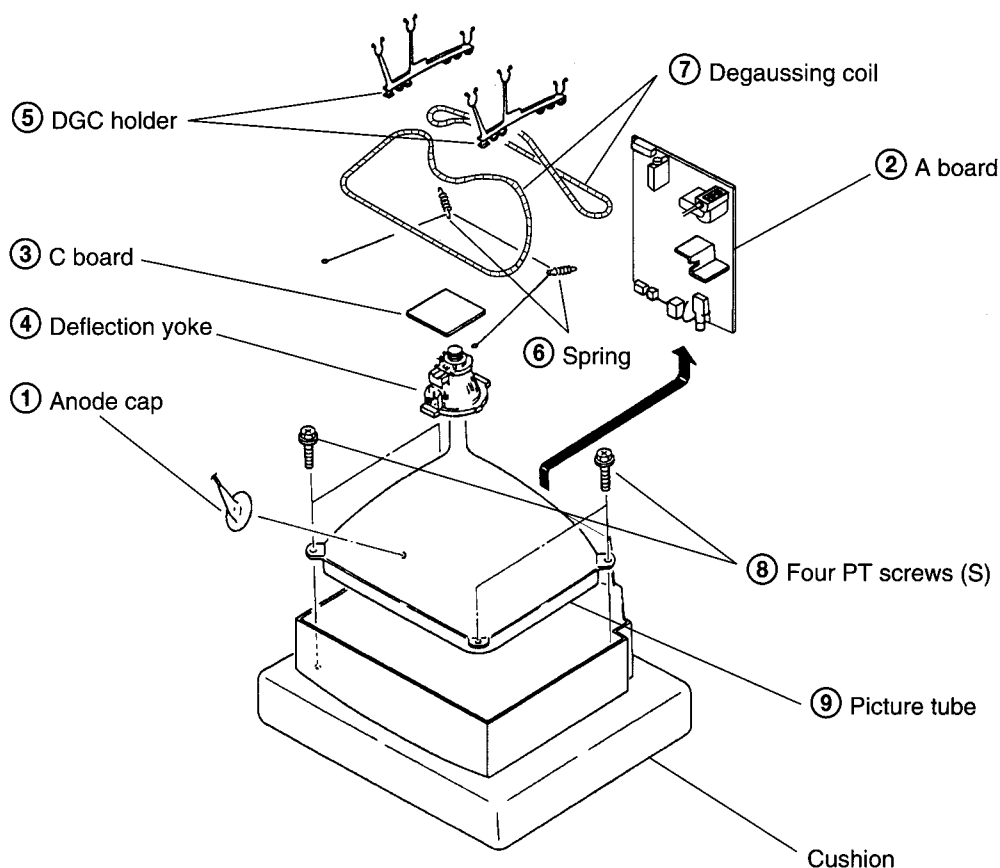
### 2-1. REAR COVER REMOVAL



### 2-2. SERVICE POSITION



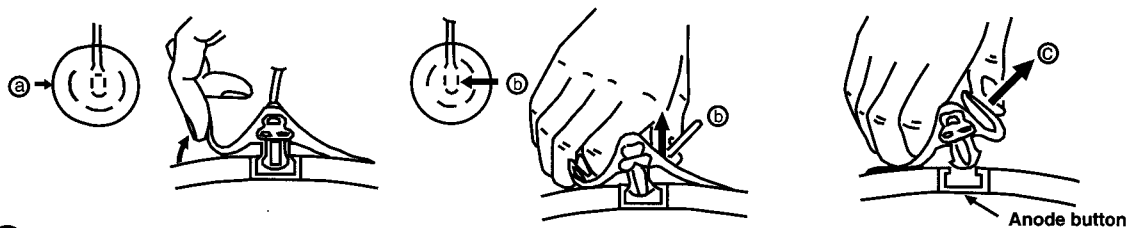
## 2-3. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

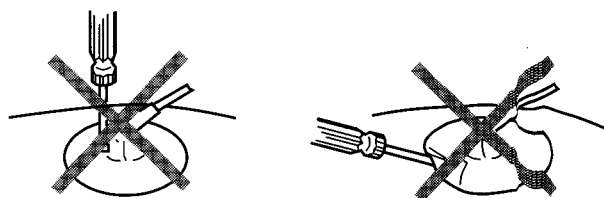
#### \* REMOVING PROCEDURES.



- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a)
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (c)

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardy not to hurt inside of anode-caps !  
A metal fitting called as shatter-hook terminal is built into the rubber.
- ③ Don't turn the foot of rubber over hardy !  
The shatter-hook terminal will stick out or damage the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with the rated power supply voltage, unless otherwise noted.

The Contrast and Brightness controls should be set as follows unless otherwise noted:

- CONTRAST control ..... 80%  
(or Normal by commander)
- ☼ BRIGHTNESS control ..... 50%

Perform the adjustments in the following order:

1. Beam Landing
2. Convergence
3. Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness.
4. Focus

**Note:** Test Equipment Required.

1. Colour bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

#### Preparation:

- In order to reduce the influence of external magnetic forces on the picture tube, face the TV set in an easterly or westerly direction.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

#### 3-1. BEAM LANDING

Demagnetize with a degausser.

1. Input an all white raster signal from the pattern generator.  
 CONTRAST } normal  
 BRIGHTNESS }
2. Switch the raster signal of the pattern generator to Red.
3. Move the deflection yoke backward, and adjust with the purity control so that Red is at the centre and the Blue and Green are evenly spaced at the sides. see (Fig. 3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes Red. (Fig. 3-1)
5. Switch the raster signal to Blue and then Green to confirm the condition.
6. When the position of the deflection yoke has been determined, tighten it with the deflection yoke mounting screw.
7. When the landing at the corners is not correct, adjust by using disk magnets. (Fig. 3-4)

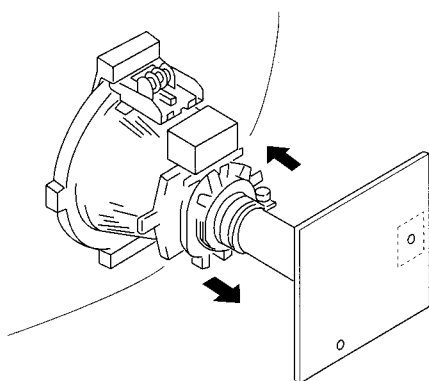


Fig. 3-1

Fig. 3-2

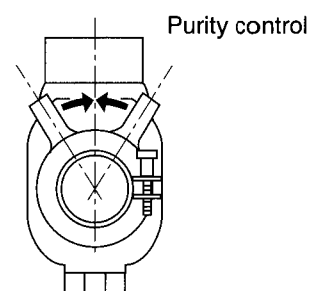


Fig. 3-3

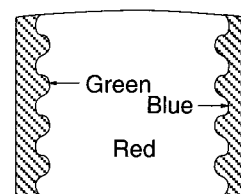
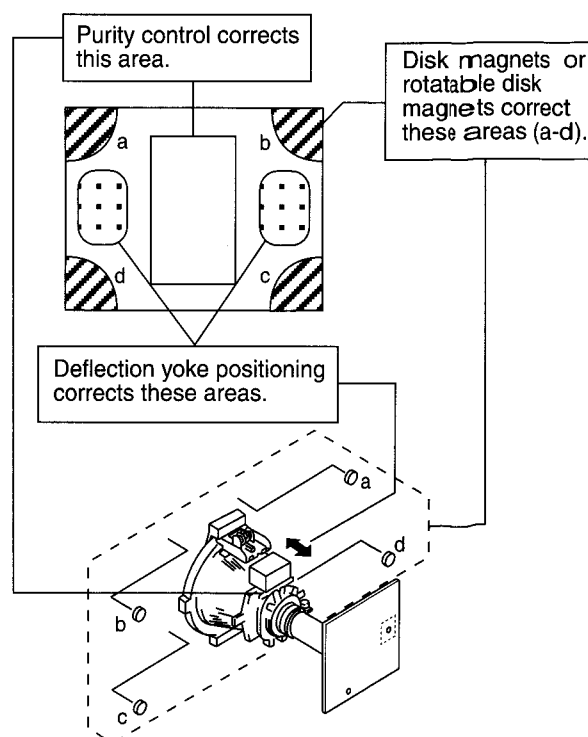


Fig. 3-4

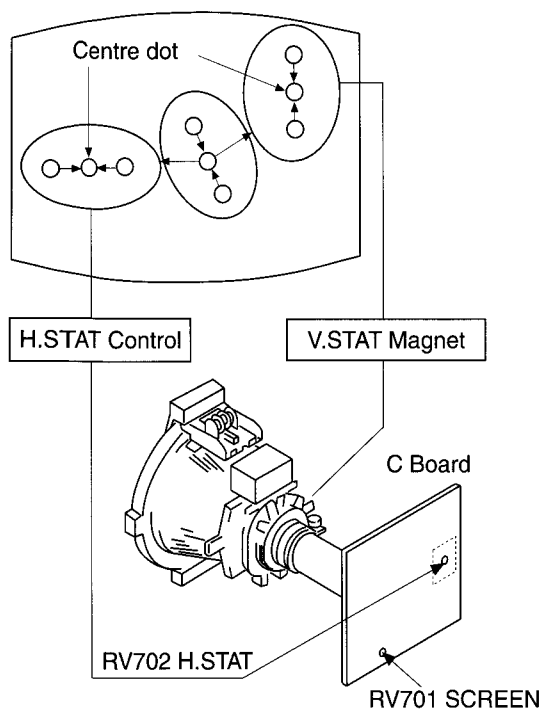


### 3-2. CONVERGENCE

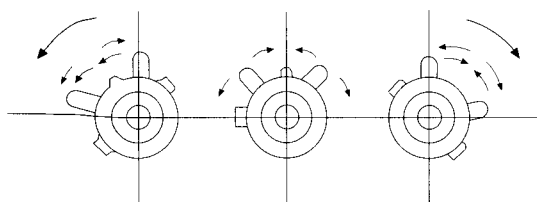
#### Preparation:

- Before starting, perform FOCUS, H.SIZE, and V.SIZE adjustments.
- Set the BRIGHTNESS control to minimum.
- Input a dot pattern from the pattern generator.

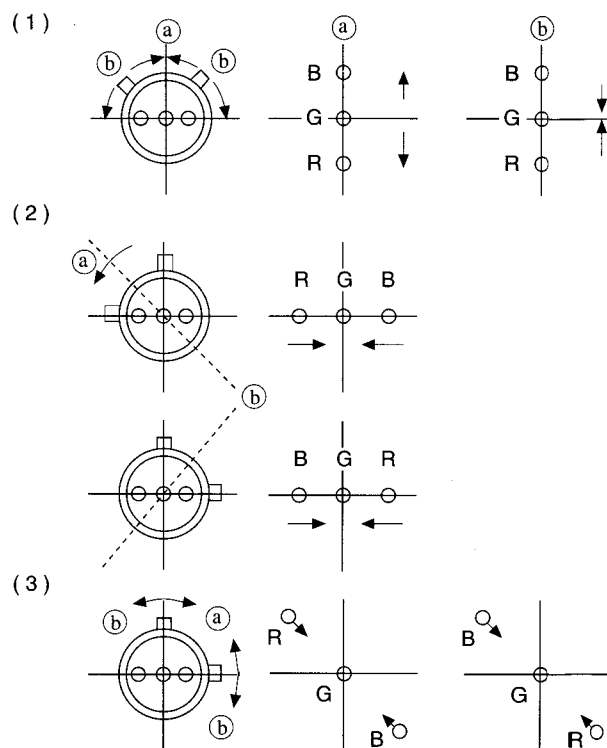
#### (1) Horizontal and Vertical Static Convergence



1. Adjust the H.STAT control to converge the Red, Green and Blue dots at the centre of the screen. (Horizontal movement)
  2. Adjust the V.STAT magnet to converge the Red, Green and Blue dots at the centre of the screen. (Vertical movement)
- If the horizontal dots cannot coincide with variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking.  
(Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)



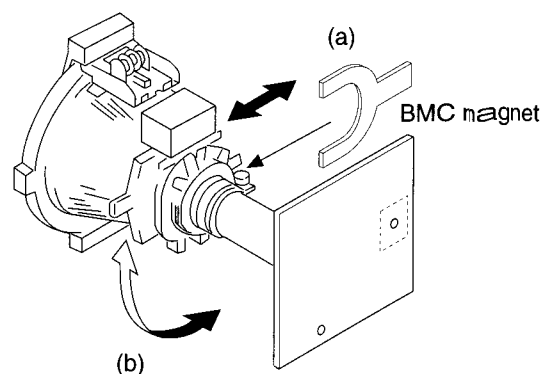
3. When the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the Red, Green and Blue dots move as shown below.



If the Red and Blue dots do not converge with the Green dots, perform the following steps.

1. Move the BMC magnet (a) to correct for insufficient H.static convergence.
2. Rotate the BMC magnet (b) to correct for insufficient V.static convergence.

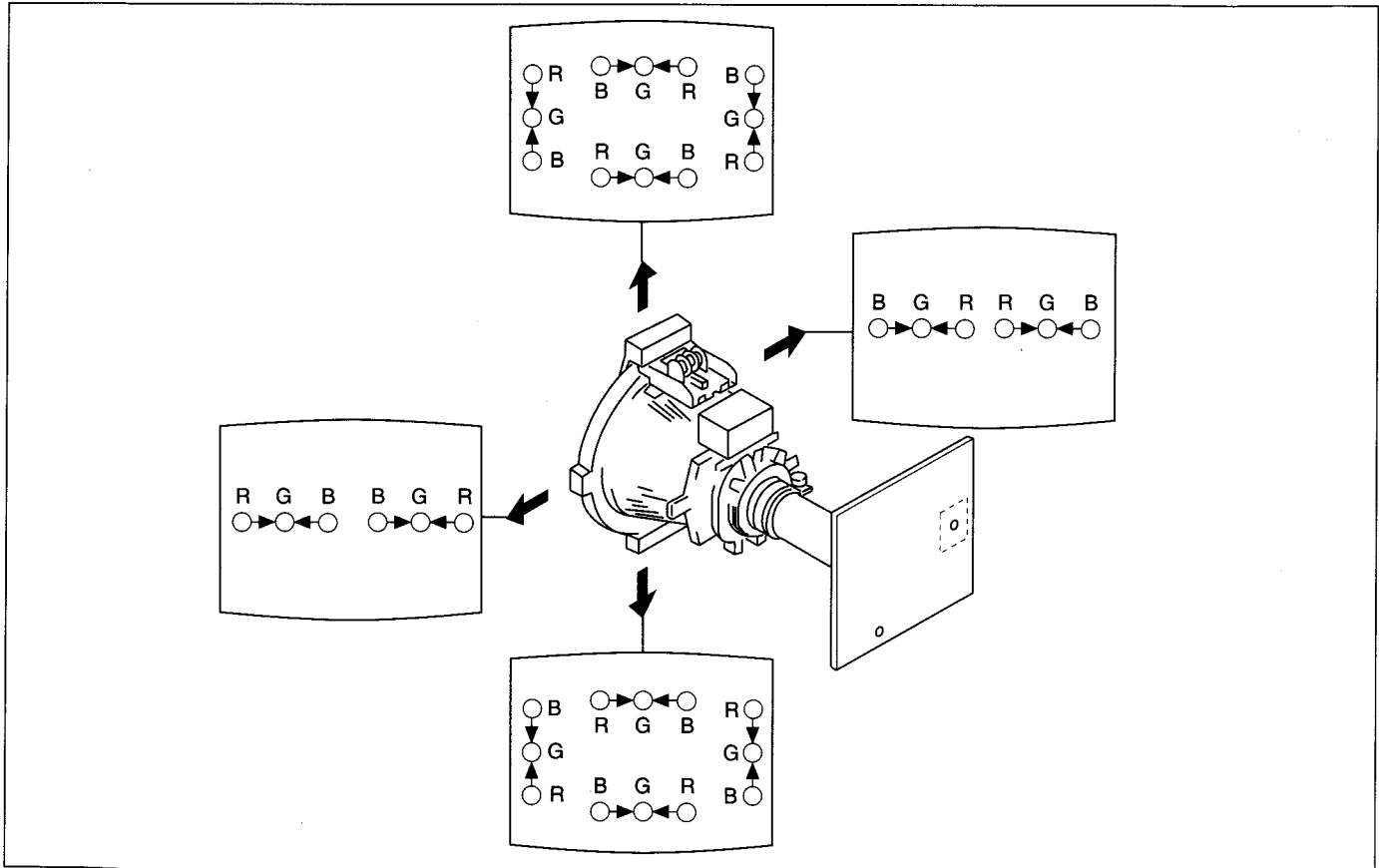
In either case, repeat the Beam Landing Adjustment.



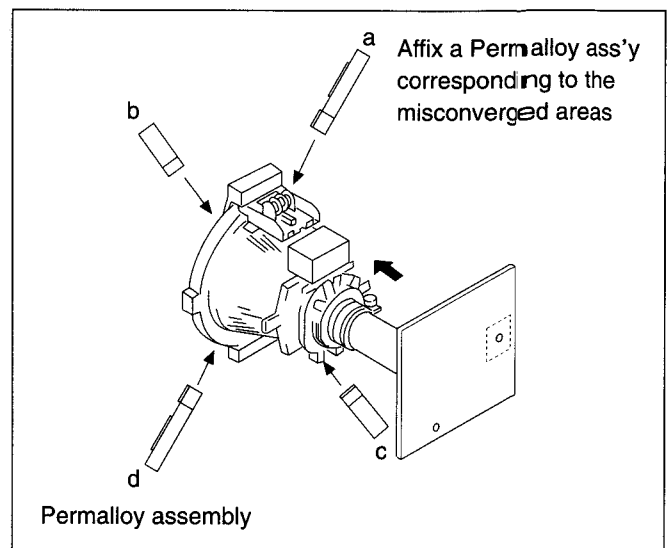
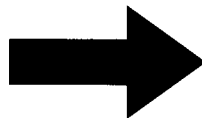
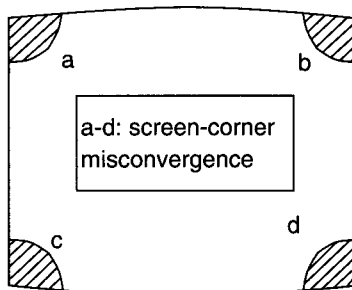
## (2) Dynamic Convergence Adjustment

### Preparation:

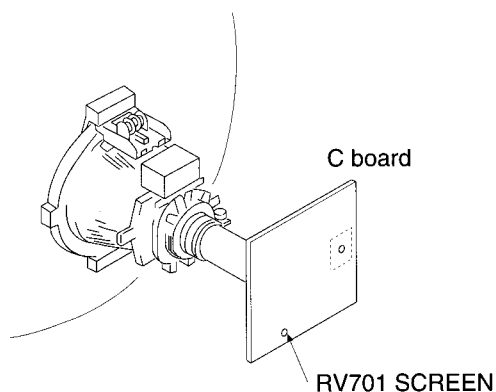
- Before starting to perform the Horizontal and Vertical static convergence adjustment.
1. Slightly loosen the deflection yoke screw.
  2. Remove the deflection yoke spacers.
  3. Move the deflection yoke for best convergence as shown below.
  4. Tighten the deflection yoke screw.
  5. Install the deflection yoke spacers.



## (3) Screen-corner Convergence.



### 3-3. SCREEN (G2), DRIVE, WHITE BALANCE, SUB COLOUR and SUB BRIGHTNESS.

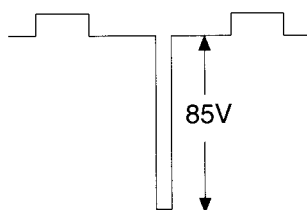


#### Screen (G2) setting

1. Input a 0 IRE (Black Level) signal from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 38.
3. Adjust RV701 until the Down arrow is displayed.
4. Adjust RV701 until the Down arrow just disappears.
5. Press the TV Button on the Remote Commander to store the data.

#### Drive Level

1. Input a Video signal containing a small area of 100% white on a black background.
2. Connect an oscilloscope to Pin (10) of J701 (R OUT) on the C Board.
3. Set the Picture to maximum using "Test""Test" and 01.
4. Enter into the Service mode (Adjust Menu).
5. Using the Blue and Green buttons select "RED HWB".
6. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform has an amplitude of 85V.

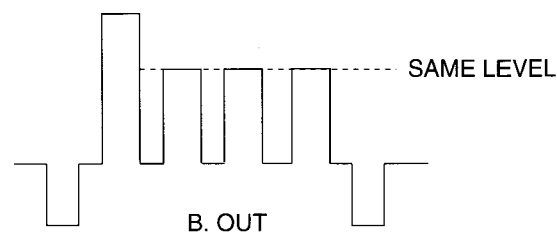


#### White Balance Adjustment

1. Input an all white pattern from the pattern generator.
2. Adjust the Colour and Brightness controls to the standard level.
3. Enter into the Service Mode.
4. Adjust the Green HWB and Blue HWB so that the White Balance becomes optimum.

#### Sub Colour Adjustment

1. Input a PAL colour bar pattern from the pattern generator.
2. Connect an oscilloscope to Pin (8) of J701 (B OUT) on the C Board.
3. Enter into the Service Mode "Test""Test" and 22.
4. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform becomes as follows :



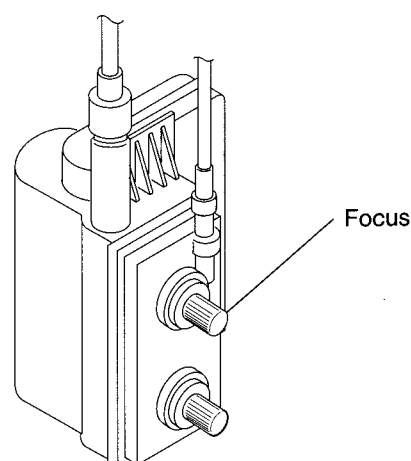
**Note :** If the TV is able to receive PAL and SECAM transmissions, repeat the above procedure using a Secam colour bar signal.

#### Sub Brightness Adjustment

1. Input a Philips pattern from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 23.
3. Using the Red and Yellow buttons on the Remote Commander adjust until the 0 IRE of the grey scale and the cut off are only slightly visible on the screen.

### 3-4. FOCUS

1. Receive a television broadcasting.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer to become the focus in the centre area properly.  
Bring only the centre area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



## SECTION 4

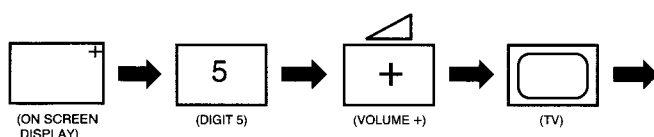
### CIRCUIT ADJUSTMENTS

#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied Remote Control Commander RM-836.

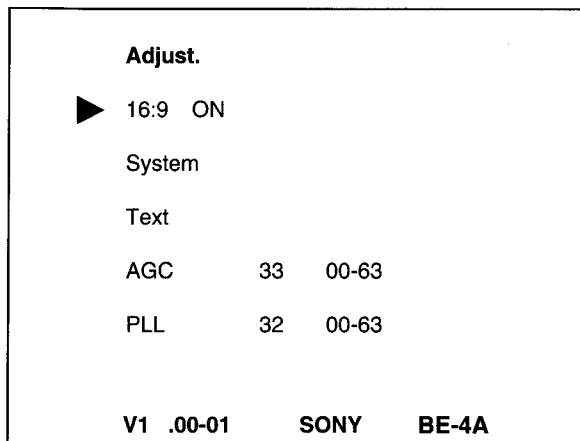
##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power of the set and enter into stand-by mode.
2. Press the following sequence of buttons on the Remote Control Commander.



"TT--" will appear in the top right corner of the screen  
Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.



Software version

Range of adjustments available from the on screen menu system.

Adjustment	Set	Range
16:9 Off	Select	ON/OFF
System	Select	BG-L, BG-DK UK, Eire, BG
Text	Select	EAST/WEST
AGC	Adj.	00 - 63
PLL	Adj.	00 - 63
B&W Delay	Adj.	00 - 63
Ver Size	Adj.	00 - 63
Ver, Breath	00	00 - 63
Par, Ampl	00	00 - 63
Par, Tilt	32	00 - 63
V, Linear	Adj.	00 - 63
Corn, corr	00	00 - 63
V, Cen or EW	Adj.	00 - 63
V, Position	42	00 - 63
H, Centre	Adj.	00 - 63
Blue HWB	Adj.	00 - 63
Green HWB	Adj.	00 - 63
Red HWB	Adj.	00 - 63

4. Press the Blue (Next) or Green (previous) buttons to select the adjustment item from the table.
5. Press the Yellow (+) or Red (-) buttons to change the data as required.
6. Turn off the power to quit the service mode when adjustments are completed.



## 4-2. TEST MODE 2:

TT -- Mode is available by pressing the Test button twice, O.S.D 'TT --' appears. The functions described below are available by pressing two digits. To release the 'TT --' mode, press 0 twice, press 'TEST' , press 'TV' or switch the TV into Stand-by mode.

00	Switch 'TT--' Mode off.
01	Set picture level to maximum.
02	Set picture level to minimum.
03	Set volume to 35%.
04	Set volume to 50%.
05	Set volume to 65%.
06	Set volume to 80%.
07	Ageing condition (picture max., brightness max.).
08	Shipping condition (Analog values are RESET to factory setting, Prog 1 is selected, TT--mode switched off, Vol = 35%).
09	Dummy.
10	No function.
11	Dummy
12	Text Picture Level Offset (Enable/Disable)
13	Select Odd / Even field for Non-interlaced teletext.
14	Select Interlaced / Non-interlaced teletext display.
15	Read factory setting from ROM to NVM - Reads Volume, Brightness, Picture, Hue, Sharpness and Colour values from ROM to the actual used values (Last Power Memory).
16	No function
17	Enable / Disable Sharpness Operation.
18	Enable / Disable Teletext Operation.
19	Enable / Disable NTSC Operation.
20	No function.
21	Sub Picture.
22	Sub Colour (Pal / Secam Different Stores)
23	Sub Brightness.
24	Destination System BG/L.

25	Destination Systems BG/L.
26	Destination Systems I.
27	Destination System I/I'.
28	Destination BG only.
29	Dummy.
30	No function.
31-32	Dummy.
33	Auto AGC Adjust.
34	Auto PLL Adjust.
35-37	Dummy.
38	Enter G2 adjustment mode.
39	Dummy.
40	No function.
41	Re-initialise NVM.
42	Dummy.
43	Re-initialise Geometry settings.
44-47	Dummy
48	Set NVM testbyte to 44h in NVM.
49	Erase NVM testbyte
50	No function.

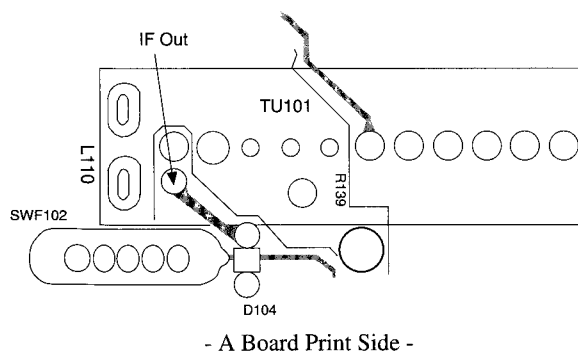
**Note :** For Test Modes 41 - 50, it is necessary to ensure that the TV is set to Prog 59.

**IF ADJUSTMENT (AUTOMATIC)**

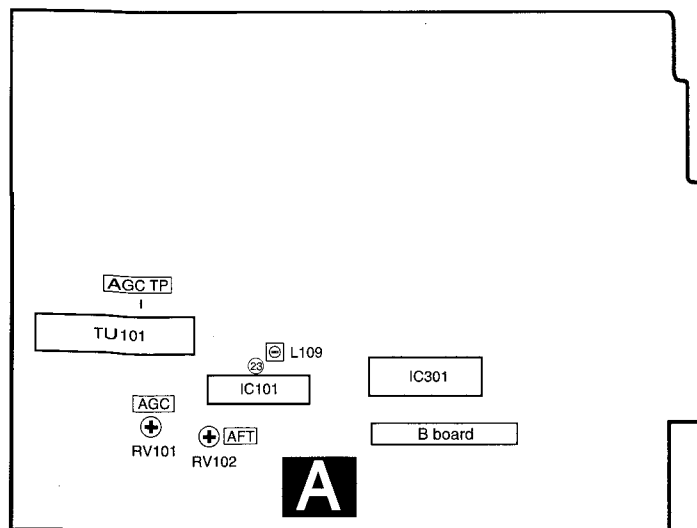
1. Input a 38.9 MHz 100dBμ CW signal at the IF Out injection point.
2. Enter into service mode and press 34.
3. Connect a digital voltmeter to IC101 pin (23).
4. Check AFT 2.5V  $\pm$ 0.3V dc.
5. Press '00' on the Remote Commander.

**SYSTEM L ADJUSTMENT  
( Italian, French, AEP, Spanish Models)**

1. Input a 33.9MHz 100dBμ CW signal at the IF Out injection point.
2. From the On Screen Menu set System to L band 1.
3. Connect a digital voltmeter to IC101 pin (23).
4. Adjust RV102 AFT for 2.5V  $\pm$ 0.3V dc.

**AGC ADJUSTMENT**

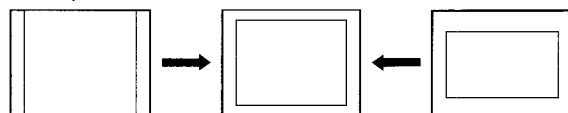
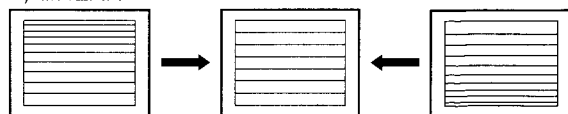
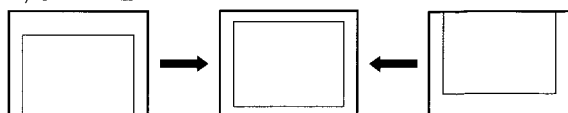
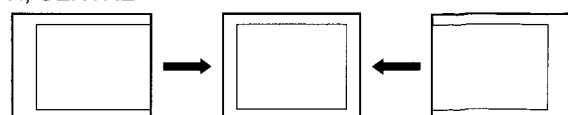
1. Receive an off-air signal.
2. Enter into the Service adjust menu and select AGC.
3. Adjust the data using the Red and Yellow buttons on the Remote Commander so that there is no snow or cross - modulation visible on the screen.
4. Change the receiving off-air channel, and confirm the above status.

**DEFLECTION SYSTEM ADJUSTMENT**

1. Enter into the service mode.
2. Using the Blue or Green buttons select the Adjust item.
3. Press the Yellow button to enter the adjustment submenu.
4. Select and adjust each item in order to obtain the optimum image.

See Note on page 23

Adjustment	Set	Range
VERT, AMPL	Adj.	00 - 63
VER, BREATH	00	00 - 63
PAR, AMPL	00	00 - 63
PAR, TILT	32	00 - 63
V, LINEAR	Adj.	00 - 63
CORN, CORR	Adj.	00 - 63
V, CENTRE	Adj.	00 - 63
V, POSITION	42	00 - 63
H, CENTRE	Adj.	00 - 63

**VERT, AMPL****V, LINEAR****V, CENTRE****H, CENTRE**

Fit the link as required to obtain the correct horizontal picture size.

### 4-3. BE-4A SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-4A chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to I<sup>2</sup>C. In the event of one of these situations arising the software will first try to release the Bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each relevant device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED by a Series of flashes which must be counted (See Table 1), Non fatal errors are reported with this method.

If a fatal error is found, the set will simply stay in whichever state it was when the error occurred, but if a non fatal error occurs the set will try to continue to operate.

**Table 1**

No of Flashes	Meaning
2	IC301 not acknowledging I <sup>2</sup> C transmission, NVM OK.
3	IC301 FAULT (Not OK) - flags
4	IC301 - No H Flyback
5	IC301 - Stack Overflow.
6	Overvoltage / Overcurrent Protection (Pin 52) high.
7	IC002 not acknowledging I <sup>2</sup> C transmission, IC301 OK.
8	IC002 and IC301 - No I <sup>2</sup> C acknowledgment.
9	General I <sup>2</sup> C Error (SDA or SCL being held low) (IC301, IC001, IC002, CN001)

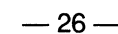
Flash Timing Example : e.g. error number 3

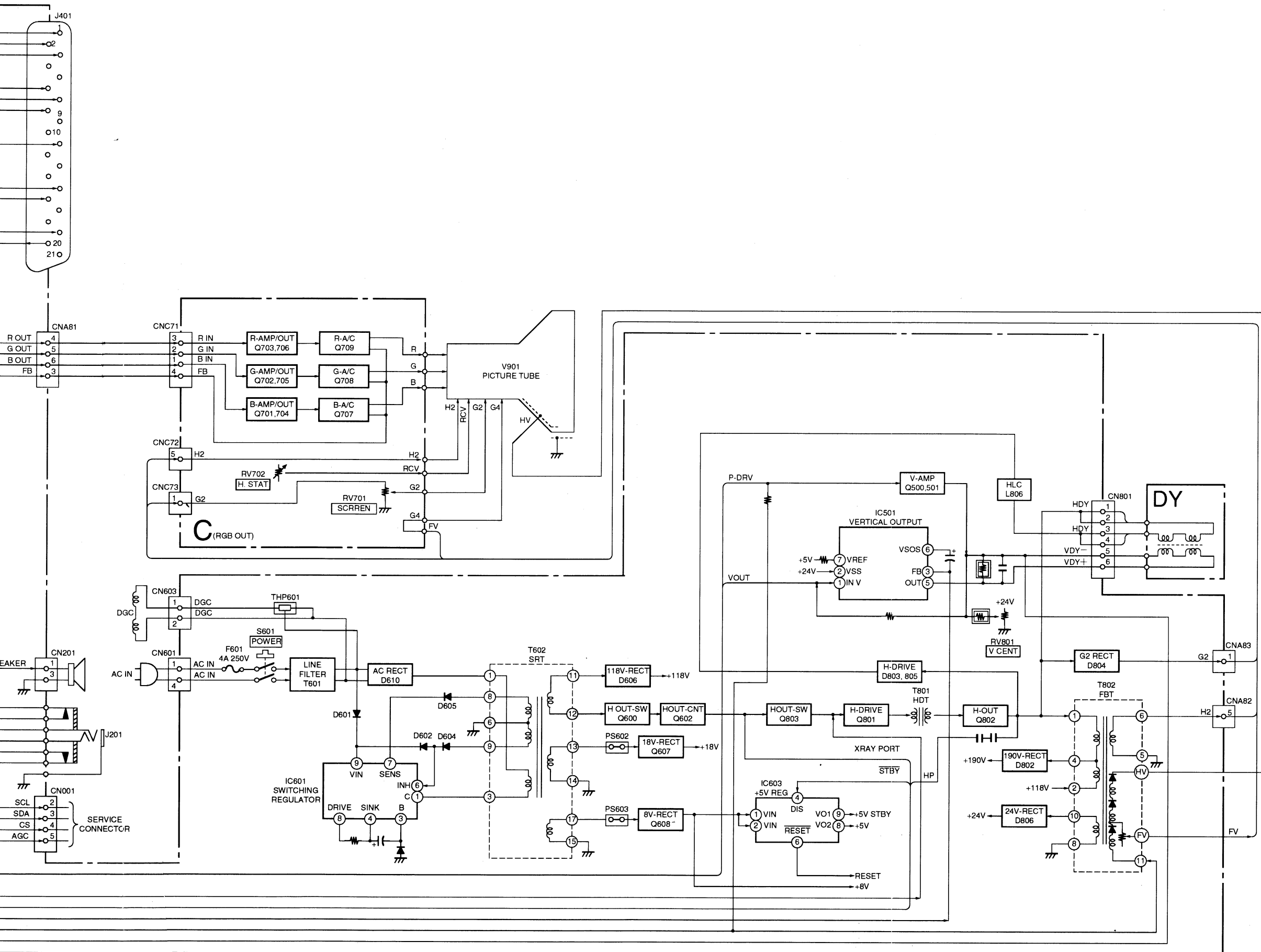
Stby LED



**Note :** Deflection System Adjustments should not be carried out whilst using an NTSC (60Hz) signal, or if the signal is unlocked.

### 5-1. BLOCK DIAGRAM

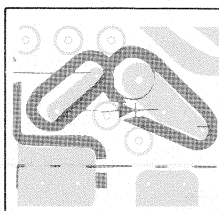








OUTPUT,



**NOTE:**

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

KV-M217

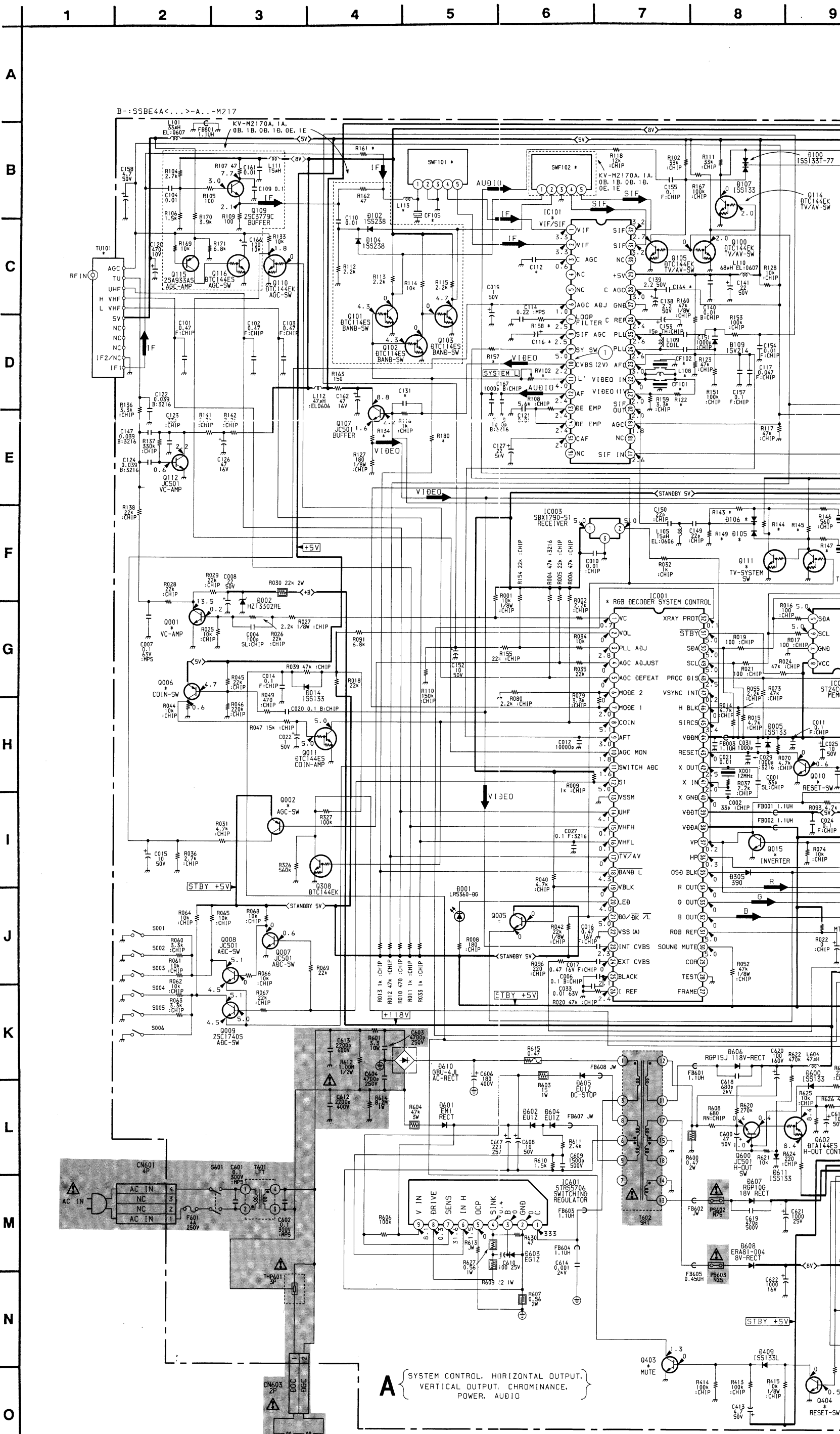
KV-M217

**A BOARD \* MARK**

Model	M2170A M2171A	M2170B M2171B	M2170D M2171D	M2170E M2171E	M2170K M2171K	M2171KR	M2170L M2171L	M2170U M2171U
Ref. No.								
C112	0.1	0.1	0.1	0.1	—	—	—	—
C116	2.2 50V	2.2 50V	2.2 50V	2.2 50V	—	—	—	—
C131	—	—	—	—	0.001	0.001	—	—
C164	1	1	1	1	—	—	—	—
C348	0.01	0.01	0.01	0.01	—	—	—	—
C349	22 50V	22 50V	22 50V	22 50V	—	—	—	—
CF101	5.5 / 5.74MHz	5.5 / 6.5MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	6.0 / 6.5MHz	6.0 / 6.5MHz
CF102	—	—	—	—	6.5MHz	6.5MHz	—	—
CF103	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz	6.0MHz
CF104	—	—	—	—	6.5MHz	6.5MHz	—	—
CF105	5.5MHz	5.5MHz	5.5MHz	5.5MHz	—	—	—	—
D105	—	—	—	—	1SS133	1SS133	—	—
D106	—	—	—	—	1SS133	1SS133	—	—
D307	1SS133	1SS133	1SS133	1SS133	—	—	—	—
D308	1SS133	1SS133	1SS133	1SS133	—	—	—	—
FB801	—	—	—	—	1.1μH	1.1μH	1.1μH	1.1μH
IC001	Refer to "A board * mark-2" table							
IC101	TDA9806	TDA9812	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806
IC301	MC44007P	MC44002P	MC44002P	MC44007P	MC44002P	MC44002P	MC44007P	MC44007P
L108	8.2μH	8.2μH	8.2μH	8.2μH	4.7μH	4.7μH	8.2μH	8.2μH
L113	0.22μH	0.22μH	0.22μH	0.22μH	0.22μH	0.22μH	0.22μH	0 : CHIP
Q001	JC501	JC501	JC501	JC501	2SC2410S	2SC2410S	2SC2410S	2SC2410S
Q002	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q005	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q006	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q010	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q012	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q013	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q014	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q015	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q111	—	—	—	—	DTC144ES	DTC144ES	—	—
Q113	—	—	—	—	DTC144ES	DTC144ES	—	—
Q307	2SA933AS	2SA933AS	2SA933AS	2SA933AS	—	—	—	—
Q402	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q403	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q404	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
R122	150	150	150	150	100	100	150	150
R134	180	180	180	180	180	180	150	150
R143	0	0	0	0	—	—	0	0
R144	—	—	—	—	2.2K	2.2K	—	—
R145	—	—	—	—	2.2K	2.2K	—	—
R147	—	—	—	—	560	560	—	—
R149	—	—	—	—	2.2K	2.2K	—	—
R157	1K	1K	1K	1K	—	—	—	—
R158	180	180	180	180	390	390	390	390
R161	0	—	0	0	0	0	0	0
R180	1K	1K	1K	1K	—	—	—	—
R347	470	470	470	470	—	—	—	—
R348	10K	10K	10K	10K	—	—	—	—
R349	220K	220K	220K	220K	—	—	—	—
R350	220	220	220	220	—	—	—	—
R355	39μF 10V	39μF 10V	39μF 10V	39μF 10V	47K	47K	47K	47K
R358	47K	47K	47K	47K	39μF 10V	39μF 10V	39μF 10V	39μF 10V
R410	75	75	75	75	75	75	68	68
RV102	22K	22K	22K	22K	—	—	—	—
SWF101	OPWG1963	OFWK3953	OPWG1963	OPWG1963	OFWK2950	OFWK2950	OFWJ1952M	OFWJ1952M
TU101	TELE1X001A	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401
X302	—	—	—	—	17.472MHz	17.472MHz	17.472MHz	17.472MHz

**A BOARD \* MARK-2 (IC001)**

KV-M2170A/M2170B/M2170D/M2170E/M2170K/M2170L/M2170U	SAA5288ZP/007
KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171L/M2171U	SAA5290ZP/007
KV-M2171KR	SAA5290ZP/006

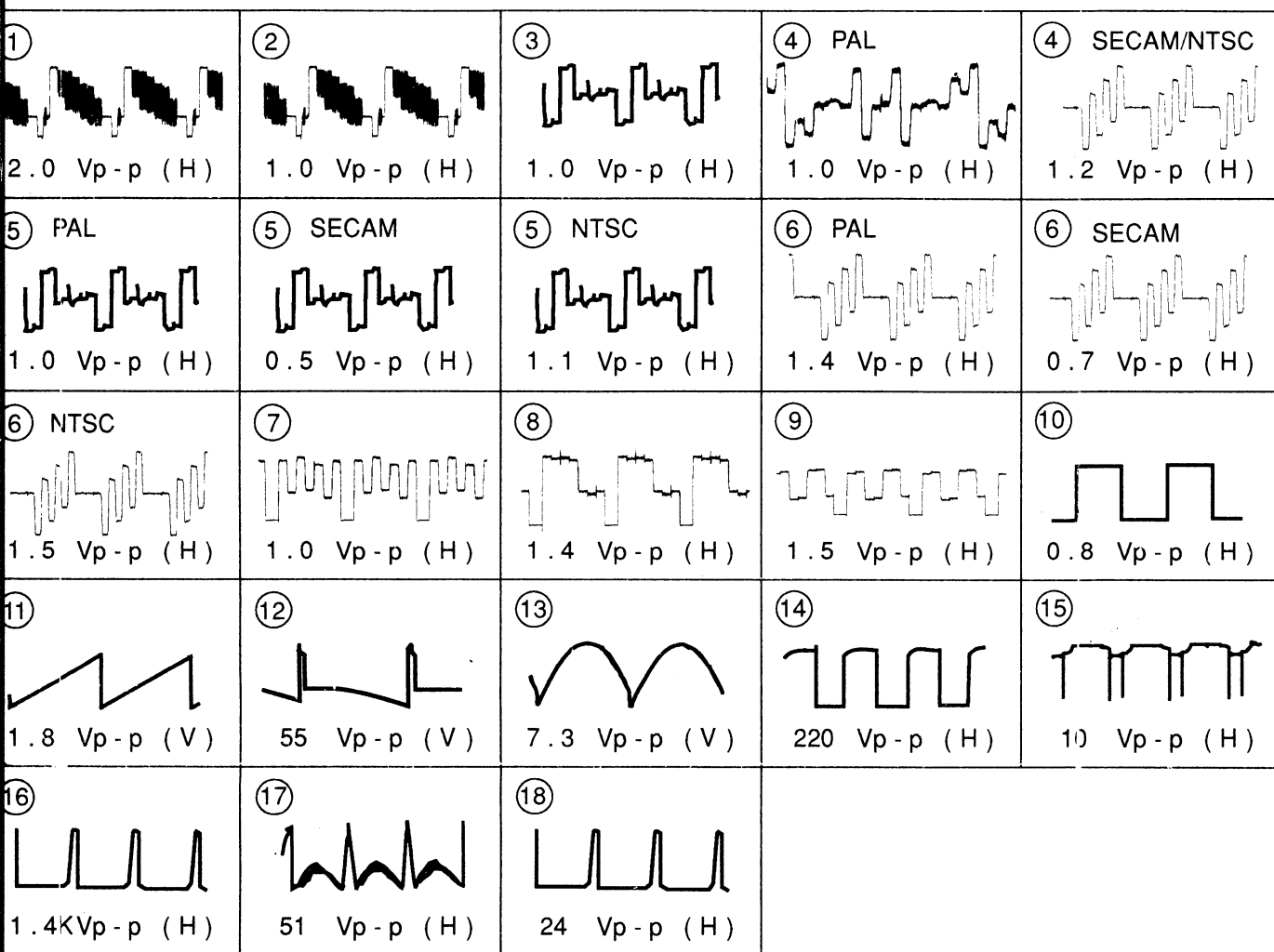




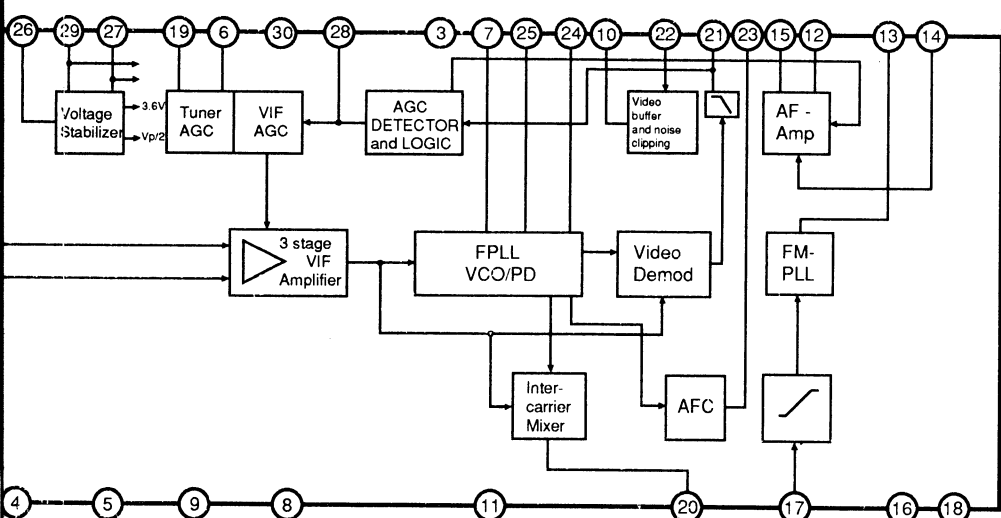




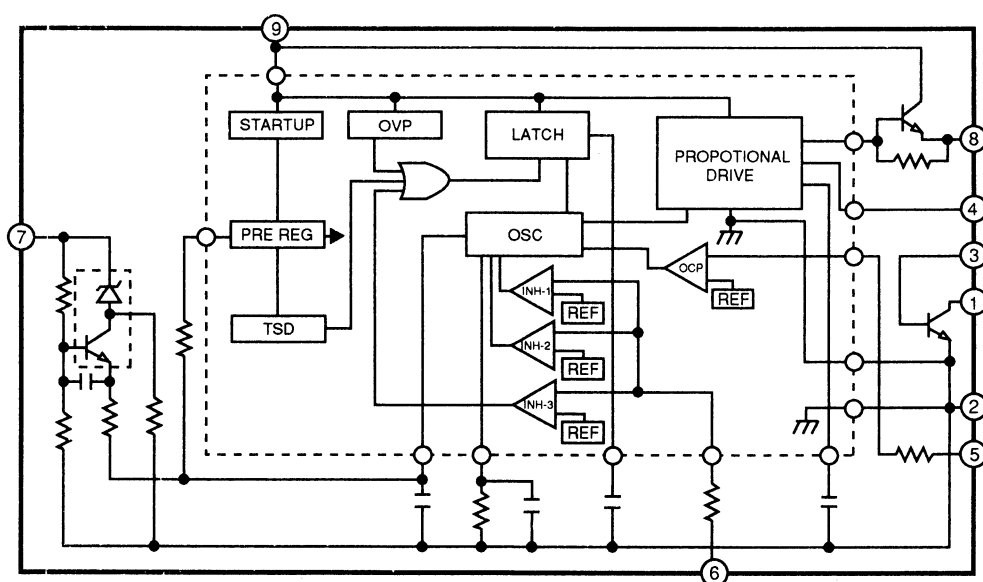
# WAVEFORMS A BOARD



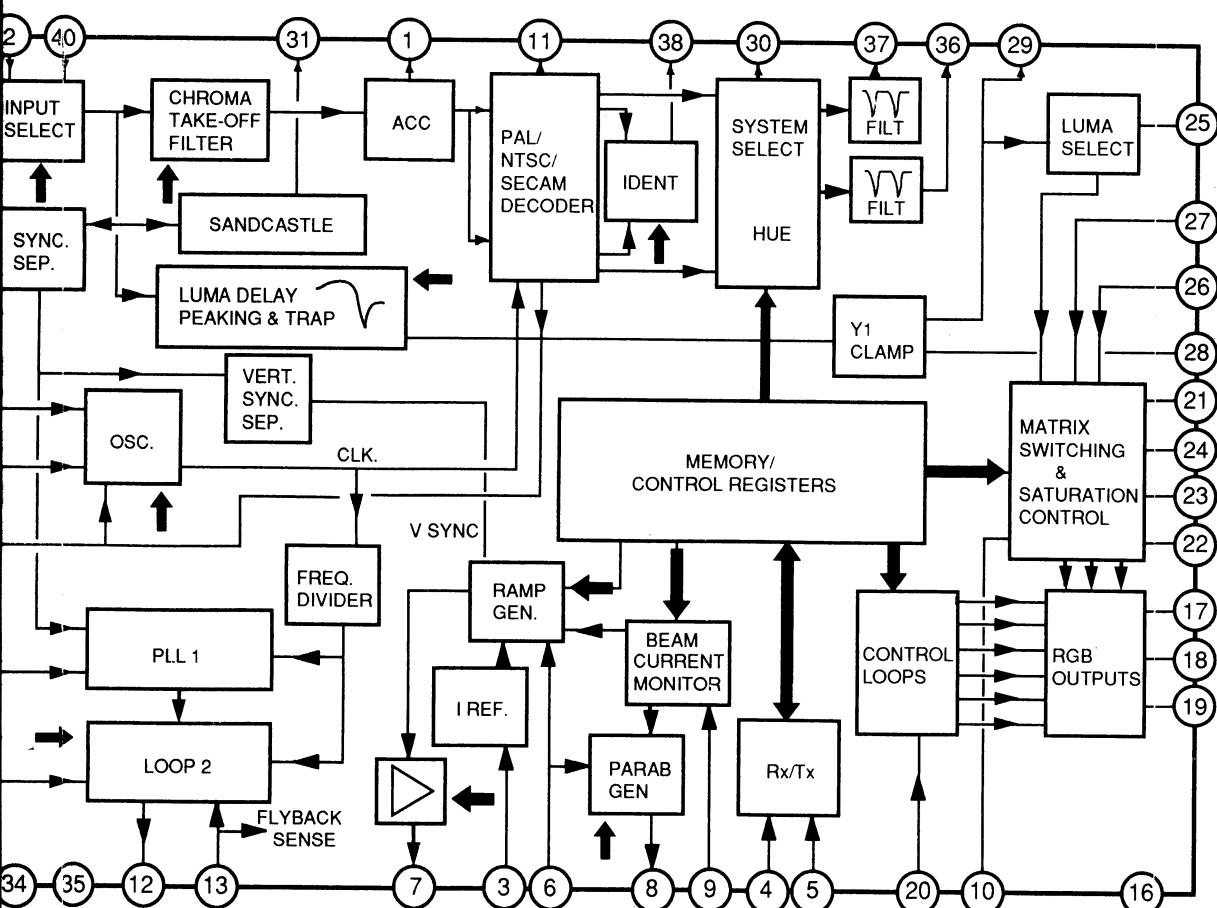
## BOARD IC101 TDA9806/TDA9812

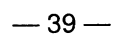
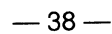


## A BOARD IC601 STRS5706



## BOARD IC301 MC44002P/MC44007P





3

4

5

6

7

8

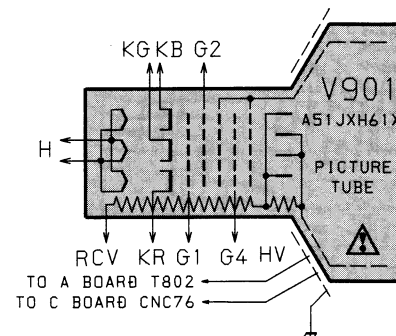
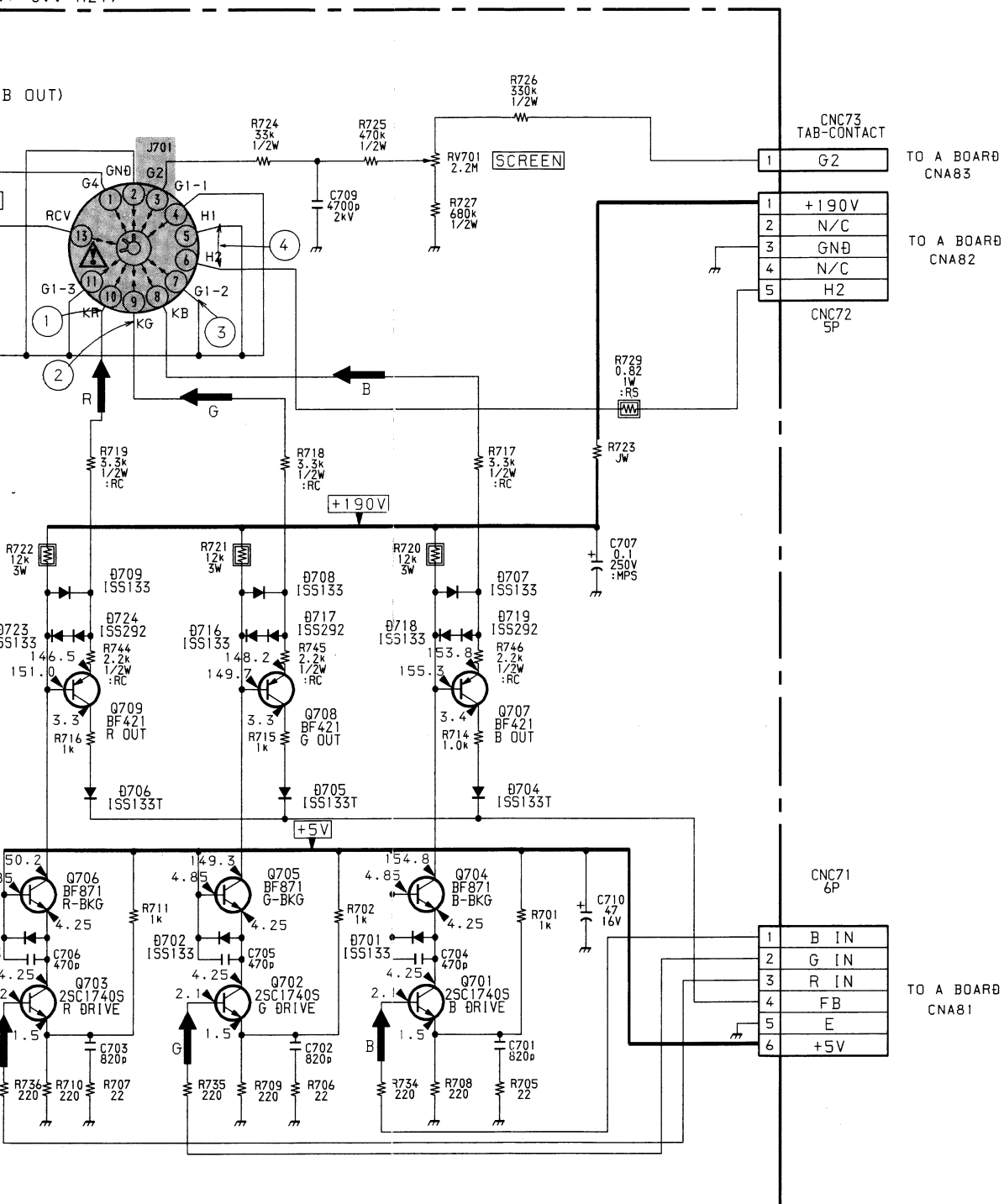
9

10

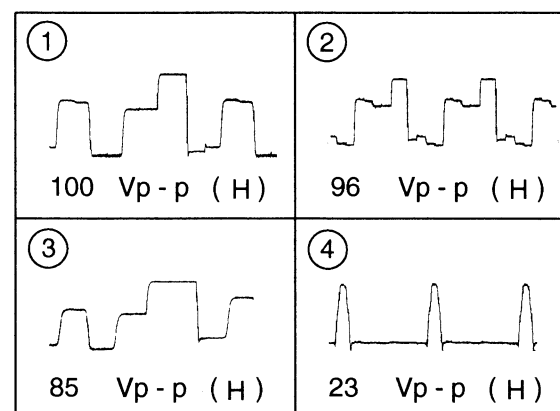
11

&gt;-C...-M217

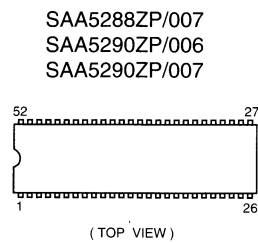
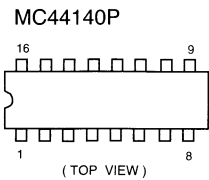
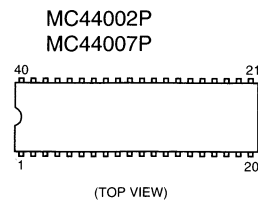
B OUT)



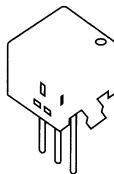
## WAVEFORMS C BOARD



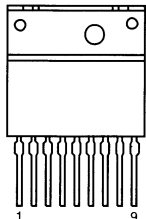
5-4. SEMICONDUCTORS



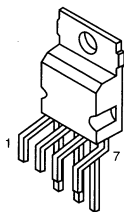
SBX1790-11  
SBX1790-51



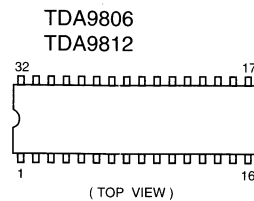
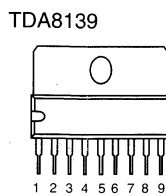
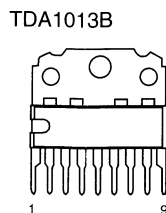
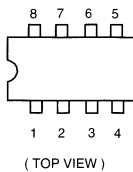
STR-S5706



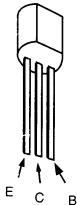
STV9379



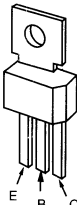
ST24C02CB1



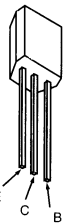
BF421  
2SA1091-O



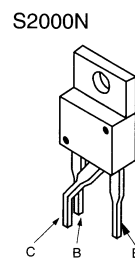
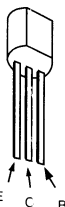
BF871



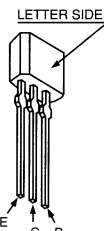
DTA144ES  
DTC114ES  
DTC144EK  
DTC144ES



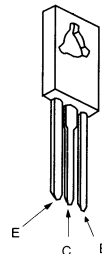
JA101-Q 2SA733-K  
JC501-Q 2SC1740S  
2SA1037K 2SC2785-HFE



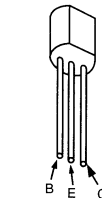
2SA933AS  
2SA933S  
2SA1175-HFE



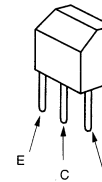
2SC2688-LK



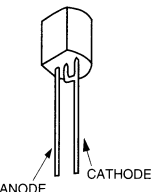
2SC3779C



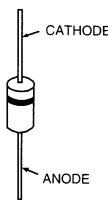
2SD774



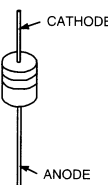
HZT33-02RE  
UPC574J



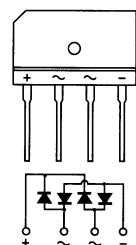
BYD33G ERD28-08S  
EG-1Z-V1 EU-1Z  
EGP20G RGP02-17EL-6433  
EL1Z RGP02-17PKG23  
EM1-V1 RGP10-GPKG23  
ERC06-15S 1SS168  
ERD28-06S 1SS238



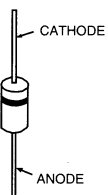
ERA81-004 RD5.1ESB2  
ERA83-006 RD6.8ESB2  
MTZJ-5.1B 1SS133  
MTZJ-6.8A



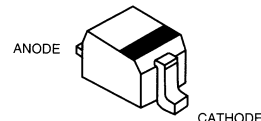
GBU4JL-6088



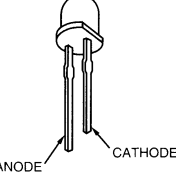
RGP15J-6040



1SV214



LR5360-DG



SECTION 6  
EXPLODED VIEWS

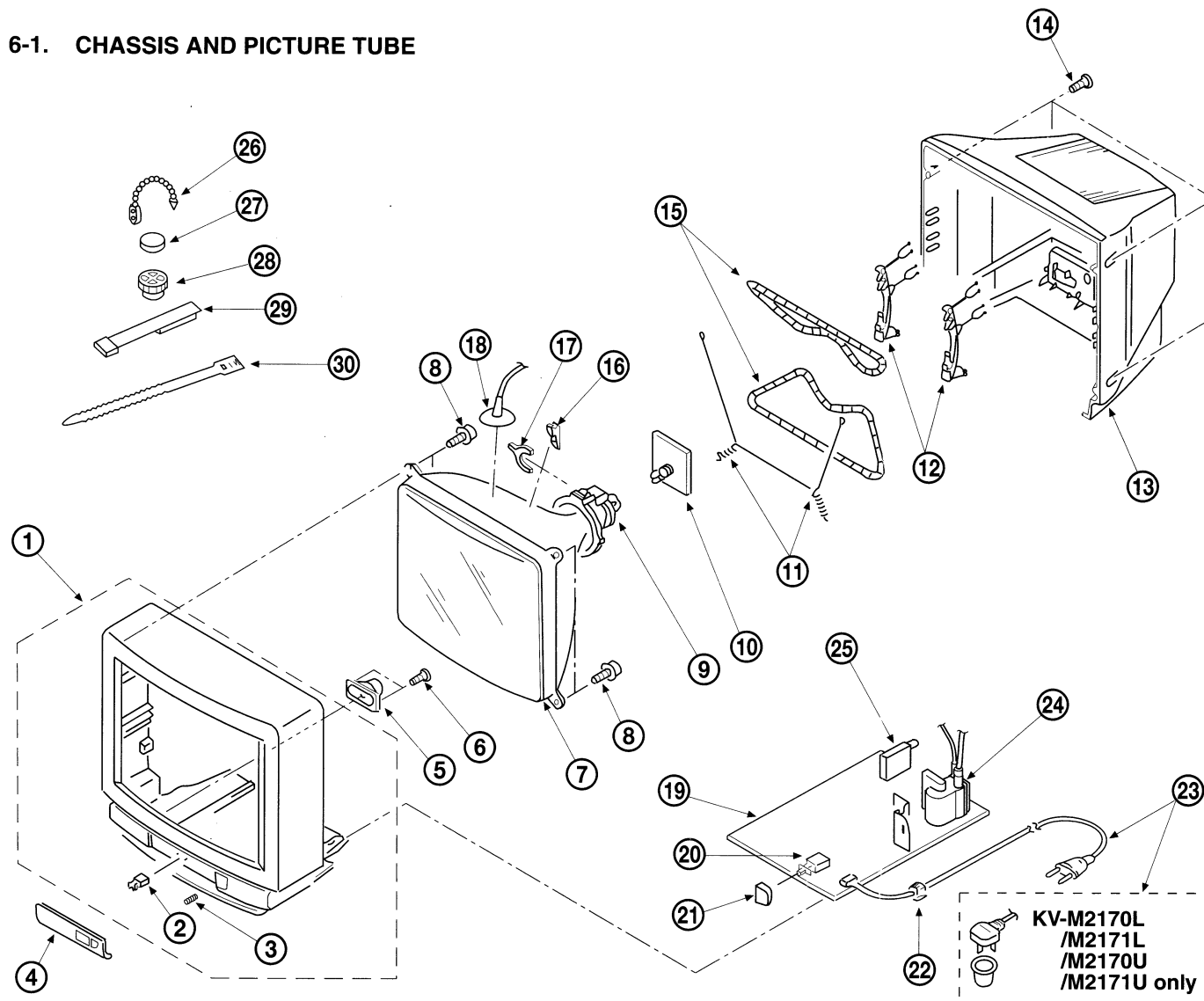
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ! are critical for safety. Replace only with the part number specified.

Les composants identifiés par une trame et une marque ! sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CHASSIS AND PICTURE TUBE



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	X-4200-229-2	BEZNET ASSY (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		6	4-039-356-01	SCREW (3x12), (+) BV TAPPING	
	X-4200-229-1	BEZNET ASSY (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)		7	! 8-738-784-05	PICTURE TUBE (SD-169) (A51JXH61X)	
2	4-392-036-01	CATCHER, PUSH		8	4-036-189-01	SCREW (S), PT	
3	4-387-829-11	SPRING		9	! 8-451-295-45	DEFLECTION YOKE (Y21PF2BA)	
4	4-203-120-31	DOOR, CONTROL (KV-M2170A/M2170B/M2170D/M2170E)		10	*A-1638-074-A	C BOARD, COMPLETE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	4-203-120-41	DOOR, CONTROL (KV-M2171A)			*A-1638-068-A	C BOARD, COMPLETE (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)	
	4-203-120-21	DOOR, CONTROL (KV-M2171B/M2171D/M2171E)		11	4-369-318-21	SPRING, TENSION	
	4-203-120-11	DOOR, CONTROL (KV-M2170K/M2170L/M2170U)					
	4-203-120-01	DOOR, CONTROL (KV-M2171K/M2171KR/M2171L/M2171U)					
5	1-503-258-21	SPEAKER					

The components identified by shading and marked A are critical for safety.

Replace only with the part number specified.

Les composants identifiés par une trame et une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
12	*4-386-622-11	BAND, DGC (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		25	1-693-303-11	TUNER (TELE1X001A)	
	*4-386-622-01	BAND, DGC (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)			1-693-331-00	TUNER (BT-AC401) (KV-M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
13	4-200-732-01	COVER, REAR (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)			1-693-310-11	TUNER (TELE4X002A) (KV-M2170K/M2171K)	
	4-200-673-01	COVER, REAR (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)			1-693-302-11	TUNER (UV1315) (KV-M2170L/M2171L)	
14	4-039-358-01	SCREW (4x16), (+) BV TAPPING			8-598-333-00	TUNER (BT-AU601) (KV-M2170U/M2171U)	
15	A 1-460-090-21	COIL, DEGAUSSING (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)		26	4-308-870-00	CLIP, LEAD WIRE	
	A 1-426-145-00	COIL, DEGAUSSING (KV-M2171A/M2171B/M2170D)		27	1-452-032-00	MAGNET, DISK; 10MM Ø	
16	3-704-495-01	SPACER, DY		28	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
17	1-452-277-00	MAGNET, BMC		29	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
18	A 1-540-006-12	CAP ASSY, HIGH-VOLTAGE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		30	3-701-007-00	BAND, BINDING	
	A 1-540-007-11	CAP ASSY, HIGH-VOLTAGE (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)					
19	*A-1632-310-A	A BOARD, COMPLETE (KV-M2170A)					
	*A-1632-309-A	A BOARD, COMPLETE (KV-M2171A)					
	*A-1632-314-A	A BOARD, COMPLETE (KV-M2170B)					
	*A-1632-315-A	A BOARD, COMPLETE (KV-M2171B)					
	*A-1632-308-A	A BOARD, COMPLETE (KV-M2170D)					
	*A-1632-307-A	A BOARD, COMPLETE (KV-M2171D)					
	*A-1632-313-A	A BOARD, COMPLETE (KV-M2170E)					
	*A-1632-311-A	A BOARD, COMPLETE (KV-M2171E)					
	*A-1632-306-A	A BOARD, COMPLETE (KV-M2170K)					
	*A-1632-304-A	A BOARD, COMPLETE (KV-M2171K)					
	*A-1632-305-A	A BOARD, COMPLETE (KV-M2171KR)					
	*A-1632-303-A	A BOARD, COMPLETE (KV-M2170L)					
	*A-1632-302-A	A BOARD, COMPLETE (KV-M2171L)					
	*A-1632-301-A	A BOARD, COMPLETE (KV-M2170U)					
	*A-1632-300-A	A BOARD, COMPLETE (KV-M2171U)					
20	A 1-571-433-21	SWITCH, PUSH (AC POWER)					
21	4-203-121-01	BUTTON, POWER (KV-M2170B/M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)					
	4-203-121-11	BUTTON, POWER (KV-M2170A/M2171A/M2171B/M2170D/M2171D/M2170E/M2171E)					
22	4-389-201-01	HOLDER, AC CORD					
23	A 1-590-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)					
	A 1-590-460-11	CORD, POWER (WITH CONNECTOR) 7.0A/250V (KV-M2170K/M2171K/M2171KR)					
	A 1-590-762-11	CORD, POWER (WITH PLUG) 2.5A/250V (KV-M2170L/M2171L/M2170U/M2171U)					
24	A 1-453-199-11	TRANSFORMER ASSY, FLYBACK (MX-1741/U2E)					



## SECTION 7

### ELECTRICAL PARTS LIST

When indicating parts by reference number, please include the board name.

**CAPACITORS**                      **COILS**  
 MF : mF, PF : mmF              MMH : mH,  $\mu$ H : mH

# A

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

#### RESISTORS

- All resistors are in ohms
- F : nonflammable

The components identified by shading and marked **A** are critical for safety.  
 Replace only with the part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité.  
 Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1632-310-A	A BOARD, COMPLETE (KV-M2170A) *****		C017	1-164-005-11	CERAMIC CHIP 0.47MF	16V
	*A-1632-309-A	A BOARD, COMPLETE (KV-M2171A) *****		C019	1-124-903-11	ELECT 1MF 20%	50V
	*A-1632-314-A	A BOARD, COMPLETE (KV-M2170B) *****		C020	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	*A-1632-315-A	A BOARD, COMPLETE (KV-M2171B) *****		C021	1-163-071-91	CERAMIC CHIP 0.01MF	50V
	*A-1632-308-A	A BOARD, COMPLETE (KV-M2170D) *****		C022	1-124-903-11	ELECT 1MF	20% 50V
	*A-1632-307-A	A BOARD, COMPLETE (KV-M2171D) *****		C024	1-163-038-91	CERAMIC CHIP 0.1MF	25V
	*A-1632-313-A	A BOARD, COMPLETE (KV-M2170E) *****		C025	1-126-964-11	ELECT 10MF	20% 50V
	*A-1632-311-A	A BOARD, COMPLETE (KV-M2171E) *****		C026	1-126-964-11	ELECT 10MF	20% 50V
	*A-1632-306-A	A BOARD, COMPLETE (KV-M2170K) *****		C027	1-163-038-91	CERAMIC CHIP 100000PF	25V
	*A-1632-304-A	A BOARD, COMPLETE (KV-M2171K) *****		C028	1-163-055-91	CERAMIC CHIP 0.0047MF	10% 50V
	*A-1632-305-A	A BOARD, COMPLETE (KV-M2171KR) *****		C029	1-163-009-91	CERAMIC CHIP 1000PF	10% 50V
	*A-1632-303-A	A BOARD, COMPLETE (KV-M2170L) *****		C030	1-163-021-91	CERAMIC CHIP 10000PF	10% 100V
	*A-1632-302-A	A BOARD, COMPLETE (KV-M2171L) *****		C031	1-163-009-91	CERAMIC CHIP 1000PF	5% 25V
	*A-1632-301-A	A BOARD, COMPLETE (KV-M2170U) *****		C033	1-137-126-91	FILM 0.01MF	5% 63V
	*A-1632-300-A	A BOARD, COMPLETE (KV-M2171U) *****		C101	1-164-005-11	CERAMIC CHIP 0.47MF	16V
	4-201-023-01	SPACER, INSULATING		C102	1-164-005-11	CERAMIC CHIP 0.47MF	16V
	4-202-373-01	SPRING, IC		C103	1-164-005-11	CERAMIC CHIP 0.47MF	16V
	4-368-683-21	SPRING, TRANSISTOR		C104	1-163-021-91	CERAMIC CHIP 0.01MF 10%	50V
	4-382-854-11	SCREW (M3X10), P, SW (+)				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	4-812-134-00	RIVET (DIA. 3.5), NYLON		C109	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
						(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
				C110	1-163-021-91	CERAMIC CHIP 0.01MF 10%	50V
						(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
				C112	1-137-399-11	FILM 0.1MF 5%	50V
						(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
				C114	1-136-169-00	FILM 0.22MF	5% 50V
				C116	1-124-925-11	ELECT 2.2MF	20% 50V
						(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
				C117	1-163-035-00	CERAMIC CHIP 0.047MF	50V
				C120	1-126-925-11	ELECT 470MF	20% 10V
				C121	1-136-153-00	FILM 0.01MF	5% 50V
				C122	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V
				C123	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
				C124	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V
				C126	1-104-658-91	ELECT 47MF	20% 16V
				C127	1-128-551-11	ELECT 22MF	20% 50V
				C131	1-163-141-00	CERAMIC CHIP 0.001MF	10% 50V
						(KV-M2170K/M2171K/M2171KR)	
				C138	1-124-925-11	ELECT 2.2MF	20% 50V
				C139	1-124-925-11	ELECT 2.2MF	20% 50V
C001	1-163-105-00	CERAMIC CHIP 33PF	5% 50V				
C002	1-163-105-00	CERAMIC CHIP 33PF	5% 50V				
C004	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
C005	1-126-964-11	ELECT 10MF	20% 50V				
C006	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C007	1-130-777-00	FILM 0.1MF	5% 63V				
C008	1-128-551-11	ELECT 22MF	20% 50V				
C010	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V				
C011	1-163-038-91	CERAMIC CHIP 0.1MF	25V				
C012	1-163-031-91	CERAMIC CHIP 10000PF	50V				
C014	1-163-038-91	CERAMIC CHIP 0.1MF	25V				
C015	1-126-964-11	ELECT 10MF	20% 50V				
C016	1-164-005-11	CERAMIC CHIP 0.47MF	16V				

< CAPACITOR >



A

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C140	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C339	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C141	1-128-551-11	ELECT 22MF	20% 50V	C340	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C147	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V	C341	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C149	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C344	1-104-658-91	ELECT 47MF	20% 50V
C150	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C345	1-163-139-00	CERAMIC CHIP 820PF	10% 50V
C151	1-163-009-91	CERAMIC CHIP 0.001MF	10% 50V	C347	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C152	1-126-964-11	ELECT 10MF	20% 50V	C348	1-163-031-91	CERAMIC CHIP 0.01MF	50V
C153	1-163-470-91	CERAMIC CHIP 15PF	5% 50V			(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
C154	1-163-031-91	CERAMIC CHIP 0.01MF	50V	C349	1-128-551-11	ELECT 22MF	20% 50V
C155	1-163-038-91	CERAMIC CHIP 0.1MF	25V			(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
C157	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C350	1-163-004-11	CERAMIC CHIP 0.1MF	10% 25V
C158	1-124-927-11	ELECT 4.7MF	20% 50V	C351	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C161	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C353	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		C355	1-163-071-91	CERAMIC CHIP 0.01MF	50V
C162	1-104-658-91	ELECT 47MF	20% 16V	C358	1-163-021-91	CERAMIC CHIP 0.01MF	10% 100V
C164	1-162-638-11	CERAMIC CHIP 1MF	16V	C359	1-126-964-11	ELECT 10MF	20% 50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		C360	1-163-021-91	CERAMIC CHIP 10000PF	10% 100V
C165	1-104-658-91	ELECT 47MF	20% 16V	C401	1-104-658-91	ELECT 47MF	20% 16V
C166	1-104-658-91	ELECT 100MF	20% 10V	C402	1-163-009-91	CERAMIC CHIP 0.001MF	10% 50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		C404	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C167	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C405	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C168	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V	C406	1-124-927-11	ELECT 4.7MF	20% 50V
C200	1-163-071-91	CERAMIC CHIP 0.01MF	10% 50V	C407	1-104-666-11	ELECT 220MF	20% 25V
C300	1-126-934-11	ELECT 220MF	20% 16V	C408	1-126-941-11	ELECT 470MF	20% 25V
C301	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C410	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C302	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C412	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C304	1-163-059-91	CERAMIC CHIP 0.01MF	10% 50V	C413	1-124-927-11	ELECT 4.7MF	20% 50V
C305	1-124-925-11	ELECT 2.2MF	20% 50V	C415	1-163-009-91	CERAMIC CHIP 0.001MF	10% 50V
C306	1-130-494-11	FILM 0.082MF	5% 50V	C416	1-163-031-91	CERAMIC CHIP 0.01MF	50V
C307	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C417	1-163-031-91	CERAMIC CHIP 0.01MF	50V
C308	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C418	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V
C309	1-124-927-11	ELECT 4.7MF	20% 50V	C500	1-130-489-00	FILM 0.033MF	5% 50V
C310	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C501	1-124-927-11	ELECT 4.7MF	20% 50V
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C502	1-163-077-91	CERAMIC CHIP 0.1MF	50V
C313	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V	C503	1-126-952-11	ELECT 1000MF	20% 35V
C314	1-163-077-91	CERAMIC CHIP 0.1MF	50V	C504	1-124-122-11	ELECT 100MF	20% 50V
C315	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C505	1-126-941-11	ELECT 470MF	20% 25V
C316	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C506	1-163-009-91	CERAMIC CHIP 0.001MF	10% 50V
C317	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C507	1-124-903-11	ELECT 1MF	20% 50V
C318	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C508	1-130-785-11	MYLAR 0.47MF	10% 100V
C319	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C509	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C320	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C600	1-126-967-11	ELECT 47MF	20% 50V
C321	1-124-927-11	ELECT 4.7MF	20% 50V	<del>C601</del>	<del>1-136-516-12</del>	<del>FILM 0.1MF</del>	<del>20% 300V</del>
C323	1-163-163-91	CERAMIC CHIP 18PF	5% 50V	<del>C602</del>	<del>1-136-516-12</del>	<del>FILM 0.1MF</del>	<del>20% 300V</del>
C324	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	<del>C603</del>	<del>1-162-599-12</del>	<del>CERAMIC 0.0047MF</del>	<del>250V</del>
C325	1-163-035-00	CERAMIC CHIP 0.1MF	10% 25V	<del>C604</del>	<del>1-162-599-12</del>	<del>CERAMIC 0.0047MF</del>	<del>250V</del>
C326	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C606	1-113-473-11	CAP, ELECT 180MF	
C327	1-163-005-91	CERAMIC CHIP 470PF	10% 50V	C607	1-104-666-11	ELECT 220MF	20% 25V
C328	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C608	1-126-964-11	ELECT 10MF	20% 50V
C329	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V	C609	1-109-921-11	CERAMIC 0.0015MF	10% 500V
C330	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C610	1-104-665-11	ELECT 100MF	20% 25V
C332	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C611	1-126-964-11	ELECT 10MF	20% 50V
C333	1-163-033-91	CERAMIC CHIP 0.022MF	50V	<del>C612</del>	<del>1-161-742-00</del>	<del>CERAMIC 0.0022MF</del>	<del>30V</del>
C335	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	<del>C613</del>	<del>1-161-742-00</del>	<del>CERAMIC 0.0022MF</del>	<del>30V</del>
C336	1-162-638-11	CERAMIC CHIP 1MF	16V	C614	1-136-538-11	FILM 0.001MF	3% 2KV
C337	1-162-638-11	CERAMIC CHIP 1MF	16V	C615	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C338	1-128-551-11	ELECT 22MF	20% 50V	C618	1-162-116-00	CERAMIC 680PF	10% 2KV
				C619	1-102-228-00	CERAMIC 470PF	10% 500V



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C620	1-124-347-00	ELECT 100MF 20%	160V	< CONNECTOR >			
C621	1-126-942-61	ELECT 1000MF 20%	25V	CN001	*1-568-880-51	PIN, CONNECTOR 5P	
C622	1-111-041-51	ELECT 1000MF 20%	16V	CN201	*1-564-506-11	PLUG, CONNECTOR 3P	
C625	1-164-222-11	CERAMIC CHIP 0.22MF	25V	CN601	<b>A</b> *1-580-844-11	PIN, CONNECTOR (POWER)	
C626	1-104-658-91	ELECT 100MF 20%	16V	CN603	<b>A</b> *1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
C627	1-104-658-91	ELECT 100MF 20%	16V	CN801	*1-580-798-11	CONNECTOR PIN (DY) 6P	
C800	1-126-772-11	ELECT 1MF 20%	250V	CNA81	*1-568-881-51	PIN, CONNECTOR 6P	
C801	1-129-746-00	FILM 0.039MF	400V	CNA82	*1-568-880-51	PIN, CONNECTOR 5P	
C803	1-136-109-00	FILM 0.68MF	200V	< DIODE >			
C804	1-124-902-00	ELECT 0.47MF 20%	50V	D001	8-719-052-94	DIODE LR5360-DG	
C806	1-102-244-00	CERAMIC 220PF	10%	D002	8-759-157-40	IC MPC574J	
C807	1-107-652-11	ELECT 10MF 20%	250V	D004	8-719-109-85	DIODE RD5.1ESB2	
C808	1-136-079-00	FILM 0.01MF	3%	D005	8-719-991-33	DIODE 1SS133T-77	
C809	1-161-754-00	CERAMIC 0.001MF	10%	D006	8-719-991-33	DIODE 1SS133T-77	
C810	1-129-702-00	FILM 0.001MF	10%	D014	8-719-991-33	DIODE 1SS133T-77	
C811	1-102-228-00	CERAMIC 470PF	10%	D100	8-719-991-33	DIODE 1SS133T-77	
C815	1-162-116-00	CERAMIC 680PF	10%	D102	8-719-903-27	DIODE 1SS168	
C816	1-162-114-00	CERAMIC 0.0047MF	2KV			(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
C817	1-136-559-11	MYLAR 0.0047MF	10%	D104	8-719-903-27	DIODE 1SS168	
C818	1-136-933-11	FILM 1MF	5%			(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
C819	1-162-318-11	CERAMIC 0.001MF	10%	D105	8-719-991-33	DIODE 1SS133T-77	
C820	1-126-951-11	ELECT 220MF	20%			(KV-M2170K/M2171K/ M2171KR)	
C822	1-104-696-11	FILM 0.015MF	10%	D106	8-719-991-33	DIODE 1SS133T-77	
C823	1-106-375-12	MYLAR 0.022MF	10%			(KV-M2170K/M2171K/M2171KR)	
C824	1-106-367-00	MYLAR 0.01MF	10%	D107	8-719-991-33	DIODE 1SS133T-77	
C827	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	D109	8-719-820-71	DIODE 1SV214	
C828	1-124-903-11	ELECT 1MF	20%	D301	8-719-991-33	DIODE 1SS133T-77	
C829	1-163-063-91	CERAMIC CHIP 0.022MF	10%	D302	8-719-991-33	DIODE 1SS133T-77	
< FILTER >				D305	1-247-821-91	CARBON 390 5% 1/4W	
CF101	1-404-801-31	TRAP, CERAMIC (KV-M2170A/M2171A/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR)		D307	8-719-991-33	DIODE 1SS133T-77	
	1-409-429-11	TRAP, CERAMIC (KV-M2170L/M2171L/M2170U/M2171U)				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	1-409-430-11	TRAP, CERAMIC (KV-M2170B/M2171B)		D308	8-719-991-33	DIODE 1SS133T-77	
CF102	1-409-327-00	TRAP, CERAMIC (6.5 MHz) (KV-M2170K/M2171K/M2171KR)				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
CF103	1-567-100-00	FILTER, CERAMIC (KV-M2170L/M2171L/M2170U/M2171U)		D401	8-719-109-97	DIODE RD6.8ESB2	
	1-760-106-11	FILTER, CERAMIC (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR)		D402	8-719-109-97	DIODE RD6.8ESB2	
CF104	1-567-101-11	FILTER, CERAMIC (KV-M2170K/M2171K/M2171KR)		D403	8-719-109-97	DIODE RD6.8ESB2	
CF105	1-760-154-11	TRAP, CERAMIC (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		D404	8-719-109-97	DIODE RD6.8ESB2	
SWF101	1-579-120-11	FILTER, SURFACE WAVE (KV-M2170A/M2171A/M2170D/M2171D/M2170E/M2171E)		D405	8-719-109-97	DIODE RD6.8ESB2	
	1-579-273-11	FILTER, SURFACE WAVE (KV-M2170B/M2171B)		D406	8-719-109-97	DIODE RD6.8ESB2	
	1-579-414-11	FILTER, SURFACE WAVE (KV-M2170K/M2171K/M2171KR)		D407	8-719-109-97	DIODE RD6.8ESB2	
	1-760-711-11	FILTER, SURFACE WAVE (KV-M2170L/M2171L/M2170U/M2171U)		D408	8-719-109-97	DIODE RD6.8ESB2	
SWF102	1-760-722-11	FILTER, SURFACE WAVE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		D409	8-719-991-33	DIODE 1SS133T-77	
				D410	8-719-109-97	DIODE RD6.8ESB2	
				D414	8-719-991-33	DIODE 1SS133T-77	
				D501	8-719-302-43	DIODE EL1Z	
				D600	8-719-991-33	DIODE 1SS133T-77	
				D601	8-719-046-77	DIODE EM1-V1	
				D602	8-719-312-61	DIODE EU-1Z	
				D603	8-719-046-78	DIODE EG-1Z-V1	
				D604	8-719-312-61	DIODE EU-1Z	
				D605	8-719-312-61	DIODE EU-1Z	
				D606	8-719-979-85	DIODE EGP20G	
				D607	8-719-302-43	DIODE EL1Z	
				D608	8-719-980-78	DIODE ERA83-006	
				D610	8-719-025-88	DIODE GBU4JL-6088	

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KV-M217

**A**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D611	8-719-991-33	DIODE 1SS133T-77		L108	1-408-405-00	INDUCTOR 4.7UH (KV-M2170K/M2171K/M2171KR)	
D801	8-719-950-57	DIODE BYD33G		1-408-408-00	INDUCTOR 8.2UH (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170L/M2171L/ M2170U/M2171U)		
D802	8-719-302-43	DIODE EL1Z		L109	1-403-686-12	COIL	
D803	8-719-945-80	DIODE ERC06-15S		L110	1-410-673-31	INDUCTOR 68UH	
D804	8-719-028-72	DIODE RGP02-17EL-6433		L111	1-410-665-41	INDUCTOR 15UH (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
D805	8-719-928-08	DIODE ERD28-08S		L112	1-408-417-00	INDUCTOR 47UH	
D806	8-719-302-43	DIODE EL1Z		L113	1-410-985-41	INDUCTOR CHIP 0.22UH (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170K/M2171K/ M2171KR/M2170L/M2171L)	
D807	8-719-991-33	DIODE 1SS133T-77		1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170U/M2171U)		
< FUSE >				L201	1-412-531-31	INDUCTOR 33UH	
F601	1-576-231-11	FUSE (H.B.C.) 4A, 250V		L602	1-408-609-41	INDUCTOR 33UH	
	1-533-230-11	HOLDER, FUSE ; F601		L603	1-410-669-31	INDUCTOR 33UH	
< FERRITE BEAD >				L604	1-408-417-00	INDUCTOR 47UH	
FB001	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L800	1-412-553-41	INDUCTOR 3.3MMH	
FB002	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L801	1-420-872-00	COIL,AIR CORE	
FB003	1-410-397-31	FERRITE BEAD INDUCTOR 1.1UH		L802	1-407-365-00	COIL,CHOKE	
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L803	1-459-390-00	COIL (WITH CORE)	
FB603	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L804	1-459-105-21	COIL (WITH CORE)	
FB604	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L805	1-412-531-21	INDUCTOR 33UH	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		L806	1-459-652-12	COIL, HORIZONTAL LINEARITY	
FB801	1-410-397-31	FERRITE BEAD INDUCTOR 1.1UH		< IC LINK >			
< IC >				PS602	1-532-686-21	LINK, IC 2.7A (ICP-M75)	
IC001	8-759-354-63	IC SAA5290ZP/006 (KV-M2171KR)		PS603	1-532-637-00	LINK, IC 1.0A (ICP-M25)	
	8-759-354-64	IC SAA5290ZP/007 (KV-M2171A/M2171B/M2171D/M2171E/M2171K/ M2171L/M2171U)		< TRANSISTOR >			
	8-759-354-82	IC SAA5288ZP/007 (KV-M2170A/M2170B/M2170D/M2170E/M2170K/ M2170L/M2170U)		Q001	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
IC002	8-759-280-74	IC ST24C02CB1		8-729-922-66	TRANSISTOR 2SC2410SN (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		
IC003	8-747-905-11	IC SBX1790-11		Q002	8-729-173-38	TRANSISTOR 2SA733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
IC101	8-759-333-17	IC TDA9812 (KV-M2170B/M2171B)		8-729-026-41	TRANSISTOR 2SA933AS-QRT (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		
	8-759-333-19	IC TDA9806 (KV-M2170A/M2171A/M2170D/M2171D/M2170E/ M2171E/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)		Q005	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
IC301	8-759-333-44	IC MC44007P (KV-M2170A/M2171A/M2170E/M2171E/M2170L/ M2171L/M2170U/M2171U)		8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		
	8-759-333-45	IC MC44002P (KV-M2170B/M2171B/M2170D/M2171D/M2170K/ M2171K/M2171KR)		Q006	8-729-173-38	TRANSISTOR 2SA733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
IC302	8-759-333-46	IC MC44140P		8-729-026-41	TRANSISTOR 2SA933AS-QRT (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		
IC401	8-759-041-82	IC TDA1013B		Q007	8-729-119-78	TRANSISTOR 2SC2785-HFE	
	4-203-017-01	HEATSINK, VR ; IC401		Q008	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC501	8-759-192-71	IC STV9379		< SOCKET >			
IC601	8-749-011-02	IC STR-S5706		J201	1-568-267-21	JACK	
IC603	8-759-337-99	IC TDA8139		J401	1-561-534-00	SOCKET 21P	
< SOCKET >				< COIL >			
J201	1-568-267-21	JACK		L101	1-410-669-31	INDUCTOR 33UH	
J401	1-561-534-00	SOCKET 21P		L105	1-408-411-00	INDUCTOR 15UH	
< COIL >				< COIL >			
L101	1-410-669-31	INDUCTOR 33UH		L101	1-410-669-31	INDUCTOR 33UH	
L105	1-408-411-00	INDUCTOR 15UH		L105	1-408-411-00	INDUCTOR 15UH	



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q009	8-729-119-78	TRANSISTOR 2SC2785-HFE		Q116	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q010	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q300	8-729-900-80	TRANSISTOR DTC114ES	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q011	8-729-900-89	TRANSISTOR DTC144ES		Q302	8-729-900-80	TRANSISTOR DTC114ES	
Q012	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q303	8-729-900-80	TRANSISTOR DTC114ES	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q304	8-729-900-80	TRANSISTOR DTC114ES	
Q013	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q305	8-729-900-80	TRANSISTOR DTC114ES	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q306	8-729-900-80	TRANSISTOR DTC114ES	
Q014	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q307	8-729-119-76	TRANSISTOR 2SA1175-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q308	8-729-901-01	TRANSISTOR DTC144EK	
Q015	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q402	8-729-173-38	TRANSISTOR 2SA733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q016	8-729-216-22	TRANSISTOR 2SA1162-G			8-729-216-22	TRANSISTOR 2SA1162-G (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q100	8-729-901-01	TRANSISTOR DTC144EK		Q403	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q101	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)			8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q102	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q404	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q103	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)			8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q105	8-729-901-01	TRANSISTOR DTC144EK		Q600	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE		Q602	8-729-900-65	TRANSISTOR DTA144ES	
Q109	8-729-022-54	TRANSISTOR 2SC3779C, D-AA (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q801	8-729-140-96	TRANSISTOR 2SD774-34	
Q110	8-729-901-01	TRANSISTOR DTC144EK		Q802	8-729-033-85	TRANSISTOR S2000N-16E30:3A	
Q111	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170K/M2171K/M2171KR)		Q803	8-729-900-89	TRANSISTOR DTC144ES	
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE		Q804	8-729-202-03	TRANSISTOR 2SD1408-Y	
Q113	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170K/M2171K/M2171KR)		Q805	8-729-140-96	TRANSISTOR 2SD774-34	
Q114	8-729-901-01	TRANSISTOR DTC144EK		< RESISTOR >			
Q115	8-729-173-38	TRANSISTOR 2SA9733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		JR004	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR007	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR008	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR009	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR012	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR013	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR014	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR015	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR017	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR018	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR019	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR020	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JR021	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR026	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR027	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				R001	1-216-222-91	METAL GLAZE 10K 5% 1/8W	
				R002	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W	
				R004	1-216-238-00	METAL GLAZE 47K 5% 1/8W	
				R005	1-216-081-00	METAL GLAZE 22K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
R006	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R008	1-216-031-91	METAL GLAZE 180 5%	1/10W
R009	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R010	1-216-041-00	METAL GLAZE 470 5%	1/10W
R011	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R012	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R013	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R014	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R015	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R016	1-216-025-91	METAL GLAZE 100 5%	1/10W
R017	1-216-025-91	METAL GLAZE 100 5%	1/10W
R018	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R019	1-216-174-91	METAL GLAZE 100 5%	1/8W
R020	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R021	1-216-174-91	METAL GLAZE 100 5%	1/8W
R022	1-216-295-00	METAL GLAZE 0 5%	1/10W
R024	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R025	1-216-222-91	METAL GLAZE 10K 5%	1/8W
R026	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R027	1-216-206-00	METAL GLAZE 2.2K 5%	1/8W
R028	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R029	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R030	1-215-900-11	METAL OXIDE 22K 5%	2W F
R031	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R032	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R033	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R034	1-247-855-91	CARBON 10K 5%	1/4W
R035	1-247-863-91	CARBON 22K 5%	1/4W
R036	1-216-059-91	METAL GLAZE 2.7K 5%	1/10W
R037	1-216-057-91	METAL GLAZE 2.2K 5%	1/10W
R039	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R040	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R042	1-216-230-00	METAL GLAZE 22K 5%	1/8W
R044	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R045	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R046	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R047	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R049	1-216-041-00	METAL GLAZE 470 5%	1/10W
R052	1-216-238-91	METAL GLAZE 47K 5%	1/8W
R055	1-216-057-91	METAL GLAZE 2.2K 5%	1/10W
R060	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R061	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R062	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R063	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R064	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R065	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R066	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R067	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R068	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R069	1-247-863-91	CARBON 22K 5%	1/4W
R070	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R071	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R072	1-216-230-00	METAL GLAZE 22K 5%	1/8W
R073	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R074	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R075	1-249-436-11	CARBON 39K 5%	1/4W
R078	1-216-071-91	METAL GLAZE 8.2K 5%	1/10W
R079	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R080	1-216-057-91	METAL GLAZE 2.2K 5%	1/10W
R081	1-249-438-11	CARBON 56K 5%	1/4W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R088	1-216-061-91	METAL GLAZE 3.3K 5%	1/10W
R089	1-216-061-91	METAL GLAZE 3.3K 5%	1/10W
R090	1-216-061-91	METAL GLAZE 3.3K 5%	1/10W
R091	1-249-427-11	CARBON 6.8K 5%	1/4W
R093	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R094	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R095	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R096	1-216-033-00	METAL GLAZE 220 5%	1/10W
R097	1-216-051-91	METAL GLAZE 1.2K 5%	1/10W
R098	1-216-051-91	METAL GLAZE 1.2K 5%	1/10W
R099	1-216-200-91	METAL GLAZE 1.2K 5%	1/8W
R102	1-216-234-91	METAL GLAZE 33K 5%	1/8W
R104	1-216-059-91	METAL GLAZE 2.7K 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R105	1-216-025-91	METAL GLAZE 100 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R106	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R107	1-216-017-91	METAL GLAZE 47 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R108	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R109	1-216-025-91	METAL GLAZE 100 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R110	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R111	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R112	1-216-057-91	METAL GLAZE 2.2K 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R113	1-216-057-91	METAL GLAZE 2.2K 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R114	1-216-073-00	METAL GLAZE 10K 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R115	1-216-057-91	METAL GLAZE 2.2K 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R116	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R117	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R118	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R122	1-216-025-91	METAL GLAZE 100 5%	1/10W (KV-M2170K/M2171K/M2171KR)
	1-216-029-00	METAL GLAZE 150 5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170L/M2171L/ M2170U/M2171U)
R123	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R124	1-216-025-91	METAL GLAZE 100 5%	1/10W
R125	1-216-025-91	METAL GLAZE 100 5%	1/10W
R126	1-216-025-91	METAL GLAZE 100 5%	1/10W
R127	1-216-180-00	METAL GLAZE 180 5%	1/8W
R128	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R133	1-249-429-11	CARBON 10K 5%	1/4W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R134	1-216-029-00	METAL GLAZE 150 5% 1/10W (KV-M2170L/M2171L/M2170U/M2171U)		R178	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
	1-216-031-91	METAL GLAZE 180 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M1440K/M1441K/ M1441KR)		R179	1-216-212-91	METAL GLAZE 3.9K 5% 1/8W	
R136	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R180	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R137	1-216-109-00	METAL GLAZE 330K 5% 1/10W		R205	1-247-741-11	CARBON 150 5% 1/2W	
R138	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R301	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R141	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W		R302	1-216-037-91	METAL GLAZE 330 5% 1/10W	
R142	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W		R303	1-216-090-00	METAL GLAZE 51K 5% 1/10W	
R143	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170L/M2171L/ M2170U/M2171U)		R304	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R144	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W (KV-M2170K/M2171K/M2171KR)		R305	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R145	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W (KV-M2170K/M2171K/M2171KR)		R306	1-216-113-91	METAL GLAZE 470K 5% 1/10W	
R146	1-216-043-91	METAL GLAZE 560 5% 1/10W		R307	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R147	1-216-043-91	METAL GLAZE 560 5% 1/10W (KV-M2170K/M2171K/M2171KR)		R308	1-216-234-91	METAL GLAZE 33K 5% 1/8W	
R149	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W (KV-M2170K/M2171K/M2171KR)		R309	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R151	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R310	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R153	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R311	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R154	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R312	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R155	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R313	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R157	1-216-049-91	METAL GLAZE 1K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R314	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R158	1-216-031-91	METAL GLAZE 180 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R315	1-216-045-00	METAL GLAZE 680 5% 1/10W	
	1-216-039-00	METAL GLAZE 390 5% 1/10W (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R316	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R159	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R317	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R160	1-216-238-91	METAL GLAZE 47K 5% 1/8W		R318	1-216-019-91	METAL GLAZE 56 5% 1/10W	
R161	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170A/M2171A/M2170D/M2171D/M2170E/ M2171E/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)		R322	1-216-022-91	METAL GLAZE 75 5% 1/10W	
R162	1-216-017-91	METAL GLAZE 47 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R323	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R163	1-249-407-11	CARBON 150 5% 1/4W		R325	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R167	1-216-246-91	METAL GLAZE 100K 5% 1/8W		R326	1-216-115-91	METAL GLAZE 560K 5% 1/10W	
R168	1-249-407-11	CARBON 150 5% 1/4W		R327	1-216-097-91	METAL GLAZE 100 5% 1/10W	
R169	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R333	1-216-037-91	METAL GLAZE 330 5% 1/10W	
R170	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R334	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R171	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R335	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R175	1-216-049-91	METAL GLAZE 1K 5% 1/10W		R336	1-216-296-91	METAL GLAZE 0 5% 1/8W	
R176	1-216-049-91	METAL GLAZE 1K 5% 1/10W		R337	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R177	1-216-049-91	METAL GLAZE 1K 5% 1/10W		R339	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
				R340	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
				R341	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
				R342	1-216-186-91	METAL GLAZE 330 5% 1/8W	
				R343	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				R344	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				R345	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
				R347	1-216-041-00	METAL GLAZE 470 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R348	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R349	1-216-105-91	METAL GLAZE 220K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R350	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R351	1-216-292-11	METAL GLAZE 8.2M 5% 1/8W	
				R352	1-216-262-91	METAL GLAZE 470K 5% 1/8W	
				R353	1-247-804-11	CARBON 75 5% 1/4W	
				R354	1-216-025-91	METAL GLAZE 100 5% 1/10W	
				R355	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
				R356	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
				R357	1-216-095-00	METAL GLAZE 82K 5% 1/10W	

The components identified by shading and marked **A** are critical for safety.  
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Ne les remplacer que par une pièce portant le numéro spécifié.

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R358	1-216-009-91	METAL GLAZE 22 5% 1/10W		R804	1-217-778-11	FUSIBLE 1K 5% 1W F	
R359	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R806	1-216-349-00	METAL OXIDE 1 5% 1W F	
R361	1-216-022-91	METAL GLAZE 75 5% 1/10W		R807	1-247-795-91	METAL GLAZE 33 5% 1/10W	
R362	1-216-022-91	METAL GLAZE 75 5% 1/10W		R809	1-215-916-51	METAL OXIDE 680 5% 3W F	
R363	1-216-022-91	METAL GLAZE 75 5% 1/10W		R810	1-247-895-91	CARBON 470K 5% 1/4W	
R401	1-216-041-00	METAL GLAZE 470 5% 1/10W		R811	1-215-869-11	METAL OXIDE 1K 5% 1W F	
R402	1-249-431-11	CARBON 15K 5% 1/4W		R812	1-215-869-11	METAL OXIDE 1K 5% 1W F	
R403	1-249-431-11	CARBON 15K 5% 1/4W		R814	1-217-811-11	FUSIBLE 0.47 5% 1/4W	
R405	1-249-389-11	CARBON 4.7 5% 1/4W F		R815	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R406	1-216-091-00	METAL GLAZE 56K 5% 1/10W		R816	1-216-369-00	METAL OXIDE 1 5% 2W F	
R407	1-216-041-00	METAL GLAZE 470 5% 1/10W		R817	1-216-447-00	METAL OXIDE 27 5% 2W F	
R408	1-216-033-00	METAL GLAZE 220 5% 1/10W		R818	1-202-830-00	SOLID 10K 10% 1/2W	
R410	1-247-804-11	METAL GLAZE 75 5% 1/4W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170K/M2171K/ M2171KR)		R819	1-249-441-11	CARBON 100K 5% 1/4W	
	1-247-698-11	METAL GLAZE 68 5% 1/4W (KV-M2170L/M2171L/M2170U/M2171U)		R820	1-249-935-11	CARBON 3.3K 5% 1/4W F	
R411	1-216-085-00	METAL GLAZE 33K 5% 1/10W		R822	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R412	1-216-105-91	METAL GLAZE 220K 5% 1/10W		R823	1-216-232-91	METAL GLAZE 470 5% 1/8W	
R413	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R824	1-216-125-00	METAL GLAZE 1.5M 5% 1/10W	
R414	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R825	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R415	1-216-222-91	METAL GLAZE 10K 5% 1/8W		R828	1-247-899-11	CARBON 680K 5% 1/4W	
R416	1-216-081-00	METAL GLAZE 22K 5% 1/10W		< VARIABLE RESISTOR >			
R501	1-208-806-11	METAL CHIP 10K 0.50% 1/10W		RV102	1-241-765-11	RES, ADJ, METAL GLAZE 22K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R502	1-216-677-11	METAL CHIP 12K 0.50% 1/10W		RV801	1-241-630-11	RES, ADJ, CARBON 10K	
R503	1-216-081-00	METAL GLAZE 22K 5% 1/10W		< SWITCH >			
R504	1-216-095-00	METAL GLAZE 82K 5% 1/10W		S001	1-571-532-21	SWITCH, TACTIL	
R505	1-216-075-00	METAL GLAZE 12K 5% 1/10W		S002	1-571-532-21	SWITCH, TACTIL	
R507	1-216-350-11	METAL OXIDE 1.2 5% 1W F		S003	1-571-532-21	SWITCH, TACTIL	
R508	1-215-865-11	METAL OXIDE 220 5% 1W F		S004	1-571-532-21	SWITCH, TACTIL	
R509	1-249-383-11	CARBON 1.5 5% 1/4W F		S005	1-571-532-21	SWITCH, TACTIL	
R600	1-216-365-00	METAL OXIDE 0.47 5% 2W F		S006	1-571-532-21	SWITCH, TACTIL	
R601	1-205-909-11	WIREWOUND 3.3 5% 10W		S601	1-571-433-21	SWITCH, PUSH (AC POWER)	
R603	1-215-858-51	METAL OXIDE 15 5% 1W F		< TRANSFORMER >			
R604	1-215-927-00	METAL OXIDE 47K 5% 3W F		T601	1-427-962-11	TRANSFORMER, LINE FILTER	
R606	1-249-441-11	CARBON 100K 5% 1/4W		T602	1-429-207-11	TRANSFORMER, CONVERTER	
R607	1-216-366-51	METAL OXIDE 0.56 5% 2W F		T801	1-437-090-00	HDT	
R608	1-216-647-11	METAL CHIP 680 0.50% 1/10W		T802	1-453-199-11	TRANSFORMER ASSY, FLYBACK (HX-1741/42E)	
R609	1-215-859-00	METAL OXIDE 22 5% 1W F		< THERMISTOR >			
R610	1-249-419-11	CARBON 1.5K 5% 1/4W		THP601	1-808-059-31	THERMISTOR (POSITIVE)	
R611	1-215-430-00	METAL 2.4K 1% 1/4W		< TUNER >			
R612	1-202-719-00	SOLID 1M 10% 1/2W		TU101	1-693-303-11	TUNER (TELE1X001A) (KV-M2170A/M2171A)	
R613	1-218-265-11	METAL 8.2M 5% 1W			1-693-331-00	TUNER (BT-AC401) (KV-M2170B/M2171B/M2170D/M2171D/M2170E/ M2171E/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)	
R615	1-217-371-00	FUSIBLE 0.47 10% 1/4W F		< CRYSTAL >			
R617	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W		X001	1-578-774-11	VIBRATOR, CRYSTAL	
R618	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W		X302	1-760-710-21	VIBRATOR, CRYSTAL (KV-M2170K/M2171K/M2171KR/M217OL/ M2171L/M2170U/M2171U)	
R620	1-215-479-00	METAL 270K 1% 1/4W					
R621	1-249-429-11	CARBON 10K 5% 1/4W					
R622	1-247-895-91	METAL GLAZE 470K 5% 1/4W					
R623	1-216-081-00	METAL GLAZE 22K 5% 1/10W					
R624	1-216-033-00	METAL GLAZE 220 5% 1/10W					
R625	1-216-073-00	METAL GLAZE 10K 5% 1/10W					
R626	1-216-089-00	METAL GLAZE 47K 5% 1/10W					
R627	1-216-346-00	METAL OXIDE 0.56 5% 1W F					
R630	1-249-401-11	CARBON 47 5% 1/4W					
R800	1-215-887-00	METAL OXIDE 150 5% 2W F					
R801	1-247-891-00	CARBON 330K 5% 1/4W					
R802	1-247-807-31	CARBON 100 5% 1/4W					
R803	1-216-081-00	METAL GLAZE 22K 5% 1/10W					


C


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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1638-074-A	C BOARD, COMPLETE	(KV-M2170A/M2171A/ ***** M2170B/M2171B/ M2170D/M2171D/ M2170E/M2171E)		< RESISTOR >			
*A-1638-068-A	C BOARD, COMPLETE	(KV-M2170K/M2171K/ ***** M2171KR/M2170L/ M2171L/M2170U/ M2171U)		R701	1-249-417-11	CARBON 1K 5% 1/4W	
< CAPACITOR >				R702	1-249-417-11	CARBON 1K 5% 1/4W	
C701	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R705	1-247-791-91	CARBON 22 5% 1/4W	
C702	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R706	1-247-791-91	CARBON 22 5% 1/4W	
C703	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R707	1-247-791-91	CARBON 22 5% 1/4W	
C704	1-102-824-00	CERAMIC 470PF 5% 50V		R708	1-247-815-91	CARBON 220 5% 1/4W	
C705	1-102-824-00	CERAMIC 470PF 5% 50V		R709	1-247-815-91	CARBON 220 5% 1/4W	
C706	1-102-824-00	CERAMIC 470PF 5% 50V		R710	1-247-815-91	CARBON 220 5% 1/4W	
C707	1-136-189-00	FILM 0.1MF 10% 250V		R711	1-249-417-11	CARBON 1K 5% 1/4W	
C709	1-162-114-00	CERAMIC 0.0047MF 2KV		R714	1-249-417-11	CARBON 1K 5% 1/4W	
C710	1-104-660-91	ELECT 47MF 20% 16V		R715	1-249-417-11	CARBON 1K 5% 1/4W	
< CONNECTOR >				R716	1-249-417-11	CARBON 1K 5% 1/4W	
CNC71	*1-568-881-51	PIN, CONNECTOR 6P		R717	1-247-758-11	CARBON 3.3K 5% 1/2W	
CNC72	*1-568-880-51	PIN, CONNECTOR 5P		R718	1-247-758-11	CARBON 3.3K 5% 1/2W	
CNC73	1-695-915-11	TAB (CONTACT)		R719	1-247-758-11	CARBON 3.3K 5% 1/2W	
CNC76	1-695-915-11	TAB (CONTACT)		R720	1-216-487-11	METAL OXIDE 12K 5% 3W F	
< DIODE >				R721	1-216-487-11	METAL OXIDE 12K 5% 3W F	
D701	8-719-991-33	DIODE 1SS133T-77		R722	1-216-487-11	METAL OXIDE 12K 5% 3W F	
D702	8-719-991-33	DIODE 1SS133T-77		R724	1-202-814-11	SOLID 33K 10% 1/2W	
D703	8-719-991-33	DIODE 1SS133T-77		R725	1-202-846-00	SOLID 470K 10% 1/2W	
D704	8-719-991-33	DIODE 1SS133T-77		R726	1-202-844-00	SOLID 330K 10% 1/2W	
D705	8-719-991-33	DIODE 1SS133T-77		R727	1-202-848-00	SOLID 680K 10% 1/2W	
D706	8-719-991-33	DIODE 1SS133T-77		R729	1-216-348-00	METAL OXIDE 0.82 5% 1W F	
D707	8-719-991-33	DIODE 1SS133T-77		R734	1-247-815-91	CARBON 220 5% 1/4W	
D708	8-719-991-33	DIODE 1SS133T-77		R735	1-247-815-91	CARBON 220 5% 1/4W	
D709	8-719-991-33	DIODE 1SS133T-77		R736	1-247-815-91	CARBON 220 5% 1/4W	
D716	8-719-991-33	DIODE 1SS133T-77		R744	1-247-756-11	CARBON 2.2K 5% 1/2W	
D717	8-719-054-81	DIODE 1SS292		R745	1-247-756-11	CARBON 2.2K 5% 1/2W	
D718	8-719-991-33	DIODE 1SS133T-77		R746	1-247-756-11	CARBON 2.2K 5% 1/2W	
D719	8-719-054-81	DIODE 1SS292		< VARIABLE RESISTOR >			
D723	8-719-991-33	DIODE 1SS133T-77		RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
D724	8-719-054-81	DIODE 1SS292		RV702	1-241-656-21	RES, ADJ, METAL FILM 110M	
< CRT SOCKET >				*****			
< TRANSISTOR >							
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q704	8-729-906-70	TRANSISTOR BF871-127					
Q705	8-729-906-70	TRANSISTOR BF871-127					
Q706	8-729-906-70	TRANSISTOR BF871-127					
Q707	8-729-200-17	TRANSISTOR 2SA1091-O					
Q708	8-729-200-17	TRANSISTOR 2SA1091-O					
Q709	8-729-200-17	TRANSISTOR 2SA1091-O					



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
MISCELLANEOUS *****				ACCESSORIES AND PACKING MATERIALS *****			
	1-452-032-00	MAGNET, DISK; 10MM Ø		4-203-127-41	MANUAL, INSTRUCTION (KV-M2170A/M2171A)		
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø			(ITALIAN)		
	1-452-277-00	MAGNET, BMC		4-203-127-51	MANUAL, INSTRUCTION (KV-M2170B/M2171B)		
	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NK-1741/U2E)			(FRENCH/GERMAN/ITALIAN)		
	1-460-090-21	COIL, DEGAUSSING (KV-M2170A/M2170B/M2171D/M2170E/M2171E/ M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		4-203-127-11	MANUAL, INSTRUCTION (KV-M2170D/M2171D)		
	1-426-145-00	COIL, DEGAUSSING (KV-M2171A/M2171B/M2170D)		4-203-130-11	MANUAL, INSTRUCTION (KV-M2170D/M2171D)		
	1-503-258-21	SPEAKER			(GERMAN)		
	1-540-006-12	CAP ASSY, HIGH-VOLTAGE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		4-203-127-71	MANUAL, INSTRUCTION (KV-M2170E/M2171E)		
	1-540-007-11	CAP ASSY, HIGH-VOLTAGE (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)			(SPANISH)		
	1-571-433-21	SWITCH, PUSH (AC POWER)		4-203-127-81	MANUAL, INSTRUCTION (KV-M2170E/M2171E)		
	1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)			(PORTUGUESE)		
	1-590-460-11	CORD, POWER (WITH CONNECTOR) 7.0A/250V (KV-M2170K/M2171K/M2171KR)		4-203-122-91	MANUAL, INSTRUCTION (KV-M2170I/M2171K)		
	1-590-762-11	CORD, POWER (WITH PLUG) 2.5A/250V (KV-M2170L/M2171L/M2170U/M2171U)			(ENGLISH/RUSSIAN/CZECH/HUNGARIAN/ POLISH/BULGARIAN)		
	1-693-303-11	TUNER (TELE1X001A) (KV-M2170A/M2171A/M2171KR)		4-203-154-91	MANUAL, INSTRUCTION (KV-M2171KR)		
	8-598-331-00	TUNER (BT-AC401) (KV-M2170B/M2171B/M2170D/M2171D/M2170E/ M2171E)			(BULGARIAN/ENGLISH/RUSSIAN)		
	1-693-310-11	TUNER (TELE4X002A) (KV-M2170K/M2171K)		4-203-122-61	MANUAL, INSTRUCTION (KV-M2170L/M2171L/M2170U/M2171U)		
	1-693-302-11	TUNER (UV1315) (KV-M2170L/M2171L)			(ENGLISH)		
	8-598-333-00	TUNER (BT-AU601) (KV-M2170U/M2171U)		*4-203-124-01	INDIVIDUAL CARTON (KV-M2170A/M2170K/M2171K/M2171KR/ M2170L/M2171L)		
	8-451-295-45	DEFLECTION YOKE (Y21PF25A)		*4-203-124-11	INDIVIDUAL CARTON (KV-M2171A/M2170B/M2171B/M2170D/M2171D/ M2170E/M2171E)		
V901	8-738-784-05	PICTURE TUBE (SD-169) (A51JH61K)		*4-203-123-01	INDIVIDUAL CARTON (KV-M2170U/M2171U)		
*****				*4-203-111-01	CUSHION (UPPER) (ASSY) (KV-M2170A/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)		
				*4-203-111-11	CUSHION (UPPER) (ASSY) (KV-M2171A/M2170B/M2171B/M2170D/M2171D/ M2170E/M2171E)		
				*4-203-112-01	CUSHION (BOTTOM) (ASSY) (KV-M2170A/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)		
				*4-203-112-11	CUSHION (BOTTOM) (ASSY) (KV-M2171A/M2170B/M2171B/M2170D/M2171D/ M2170E/M2171E)		
				*4-042-477-01	BAG, PROTECTION (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		
				*4-039-905-02	BAG, PROTECTION (KV-M2170K/M2171K/M2171KR/M2171L/ M2171L/M2170U/M2171U)		
				REMOTE COMMANDER *****			
				1-473-194-11	COMMANDER, STANDARD TYPE (RM-86)		
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